

## TUPEC092

### Prevalence of HIV in Northeastern Nigeria: A Case of Comprehensive HIV Service Delivery in 3 IDP Camps in Borno State

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**Background:** The humanitarian crisis in North-East Nigeria has had its greatest impact in Borno, Adamawa and Yobe states who now depend largely on humanitarian assistance for their survival. According to the 2017 UNDP estimates, 8.5 million people are caught in the middle of this crises resulting in widespread displacement, insecurity, destroyed infrastructure and collapsed basic services. Humanitarian setting present context of fragility, vulnerability and uncertainties, some of which encourages and exacerbates HIV transmission. The relationship between HIV, humanitarian emergencies and prolonged conflict is multifaceted and complex. The recent 2019 NAHIS reported HIV prevalence in Borno state to be 1.3%, however in the IDP camps, the risk of transmission has increased due to unavailability of HIV services. This study aims to determine the prevalence of HIV infection and uptake of comprehensive HIV services in 3 IDP camps.

**Methods:** A case study approach was adopted using routine data collected across comprehensive HIV service delivery points in 3 main IDP camps located in 3 LGAs (Bama, Ngala and Dikwa) of Borno state. Primary data was collected from the general population (excludes pregnant women) using HIV Data Capturing Tools routinely used at service delivery points in the camps with baseline characteristics such as aggregate test results and facility attendance. The study lasted for 12 months between January 2018 to December 2018. STATA 14 was used for data analysis.

**Results:** Findings revealed that the prevalence rate of HIV in the 3 IDP camps were 1.98% (Ngala), 0.59% (Banki ) and 0.38% (Dikwa). The average prevalence across the 3 sites is estimated at 0.98%. The study result is closely related to the recent survey by NAHIS which revealed the prevalence rate in Borno state to be 1.3%. The finding also depicts that uptake of HIV Testing Services across the 3 sites were 51.19% (Ngala), 77.19% (Banki) and 40.56% (Dikwa). This means that the uptake of HIV service in Dikwa is low compared to Banki and Ngala. It is observed that there is no significant correlation ( $r=0.12$ ) between prevalence of HIV and uptake of HIV service in 3 IDP camps.

**Conclusions:** In this study, the prevalence of HIV is high in Ngala as compared to Banki and Dikwa IDP camps. Also, HIV service uptake is lower in Dikwa as compared to Banki and Ngala. The study recommended that improved awareness of HIV infection and services may likely enhance health seeking behavior in the IDP camps.

## TUPEC093

### La Prévalence des Infections Virales (VIH ; VHB) chez les Donneurs de Sang à l'Unité de Transfusion de l'Hôpital National Ignace Deen du 1<sup>er</sup> Janvier au 30 Juin 2017

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**Introduction:** La disponibilité et l'utilisation des produits sanguins contribuent à réduire la morbidité liée à la demande de sang. Cependant la transfusion sanguine est associée à des risques bien définis entre autres la transmission des virus de l'immunodéficience humaine (VIH) ; des hépatites B(VHB) et C(VHC).

L'objectif était de déterminer la séroprévalence du VIH et VHB chez les donneurs de sang à l'unité de transfusion sanguine de l'hôpital National Ignace Deen.

**Méthodologie:** Il s'agissait d'une étude prospective de type descriptif d'une durée de 6 mois allant du 1<sup>er</sup> janvier au 30 juin 2017 réalisée à l'unité de transfusion sanguine de l'hôpital National Ignace Deen CHU DE Conakry. Elle a concerné les donneurs de sang pendant la période d'étude.

**Résultats:** Durant la période d'étude ; il ya eu 1637 personnes qui se sont présentés pour don de sang. Parmi eux, 150 étaient porteurs de virus VIH ou VHB soit une fréquence de 9%. Parmi les 150 porteurs de virus 86,66% avaient le VHB et 13,34% avaient le VIH. Tous les cas de VIH étaient de type 1. Nous avons noté une prédominance masculine (70%) avec un sex ratio de 2,33. L'âge moyen de nos patients était de 43 ans. Les donneurs mariés étaient les plus représentés (54%) contre 46% de célibataires. 94% de notre population d'étude était de type urbain contre 6% qui était rural. Sur les 130 cas de VHB+, 49,23% du secteur informel suivis des élèves/étudiants (24,61%). Sur les 20 cas de VIH+, 40% étaient du secteur informel suivis de 30% de secteur formel.

**Conclusion:** Il ressort de cette étude que la prévalence des infections virales VIH et VHB reste élevée chez les donneurs de sang. Et le VHB est largement au dessus avec une prédominance masculine et de la couche jeune sexuellement active.

**Mot clés:** VHB ; VIH ; donneur de sang ; Hôpital Ignace Deen, Conakry

## TUPEC094

### **Education the Social Vaccine for Youth HIV Prevention. Are We Doing Enough? Systematic Analysis of the Education Situation in Eswatini**

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**Background:** Eswatini has more than 350 000 of young people between the ages 10-24 years. Education remains a fundamental intervention in ensuring an economic and social developed society with decent work. Eswatini provides free primary education, but faces issues of grade repeating and drop-outs throughout primary and secondary, and overall low enrolment and attendance at higher levels. The education and training sector policy assures the provision of relevant educational and training programmes, and commits the country to inclusive, life-long learning and improvements in access, quality, equity, relevance, efficiency, and delivery of education. Beginning in 2008, the MOET introduced the 'Schools as Centres of Care a Support' programme. In the highest prevalence of HIV/AIDS in Eswatini, and endemic issues of violence against children, the Inqaba programme strives to promote school environments that are child-friendly, safe, and conducive for learning.

**Methods:** The systematic analysis of the education situation in Eswatini was prepared in stages: desk review and analysis, consultations/interview meetings with key stakeholders, data analysis and compilation of the report.

**Results:** Eswatini has an enabling policy environment, combined with free primary education indicating momentous effort to provide quality, appropriate, and affordable education for all. Over 90% of primary-aged children are enrolled in school. The country has not seen the same success at secondary and tertiary levels, only 27% of secondary -school aged children are actually enrolled in school. Young women overwhelmingly (38.3%) report pregnancy as their reason for dropping out. This could explain the high HIV prevalence among young females aged 15-19 years standing at 10.2%, compared to 1.9% for males the same age. In the age group 20-24 years, HIV prevalence amongst females is 38.2%, compared to 12.3% for males in the same age bracket. HIV incidence is also significantly higher amongst young Emaswati females (15-19 years) compared to the males same age group standing at: 3.84 for females compared to 0.84 for males. The protective years of education finish very early among young people, thus making them more vulnerable.

**Conclusion:** Expansion of the Free Primary Education Act to include the 3 years of junior secondary, thereby becoming a Free Basic Education Act entitling all children to at least 12 years of schooling free of charge. Extending the protective effects of education.

## TUPEC096

### Sexual Partner Notification Dramatically Increases the HIV Testing in Burundi: RAFG Data Program Review

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**Issues:** According to the UNAIDS 2018 Spectrum projections, 82,041 people nationwide had HIV among them, 20% remained undiagnosed. To address this gap in knowledge of HIV status and to achieve UN testing and treatment goals 90-90-90 goals by 2020 - new approaches are needed that enhance the efficiency and coverage of testing. Furthermore, Burundi is facing to a progressively decreasing budget allocated for the HIV response and consequently has to find out less budgetary interventions. However, partner testing services, including partner notification, have not been routinely implemented as sexual partners disclosure is still a taboo within Burundi context.

**Descriptions:** Implementation of the sexual partner notification strategy required the following steps:

Training of facility-based and community-based providers, develop specific tools based on the PNS cascade, coaching and mentoring visits for sites, daily data analysis.

Index clients were identified in: newly diagnosed HIV positive, PLHIV under 6 months on ART and those with high viral load. All sexual contacts were either passively (notified by the index clients) or actively reached and tested. Calls and HIV self-testing during home visits were used within the active notification approach

**Lessons learned:** The overall quarterly yield ranges from 1.1% (1.310 / 117.385) for Q1/FY19 to 3.6% (2.162 / 60.009) for Q3/FY19. Index testing yielded from 7.9% (207 / 2,632)/Q1 to 26.3% (1,390 / 5,290)/Q3. The cumulative index testing shows a better yield for women: 20 % (1.146 / 5.726) compared to men: 16.5% (888 / 5.398). The proportion of index testing among all HIV positives increased progressively from 16% ( 207/1,310) in Q1, 39 % ( 582/1,495) in Q2 and 64% ( 1,379/2,162) in Q3. The positivity rates ranked by provinces:

o Bujumbura Mairie Q1 :8.4% (84/997) ; Q2 :12.3% (143/1,160) ; Q3 :17.9% (367/2,049)

o Kirundo Q1:5.3% (34/642); Q2:14.4% (199/1.395) and Q3:16.1% (507/3.150)

o Gitega Q1:13.8% (16/116); Q2:10.5% (48/458) and Q3:13.3% (142/1.065)

In an HIV low-prevalence country such as Burundi, it is increasingly difficult to find HIV-infected cases. To reach the residual cases, RAFG Activity has initiated innovative strategies. Provinces with 2016-2017 DHS high prevalence remain the most contributing in case finding within the PEPFAR Burundi program.

**Next steps:** We recommend that the Burundi's HIV control program scale up the sexual partner notification strategy widely to move towards epidemic control by 2020.

## TUPEC097

### **Predictors of Mortality at Month 12 in HIV-1 Infected Adults on Antiretroviral Therapy in Senegal from January 2007 to December 2018: A Retrospective Cohort Study**

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**Background:** Highly active antiretroviral therapy has significantly decreased the HIV-associated mortality worldwide, but early mortality remains high in resources limited settings. Thus it is important to define correlates of mortality in order to improve outcome.

**Objectives:** The aim of this study was to measure the mortality rate at 12 months of treatment and to identify predictors of mortality in HIV-1 infected adults in Senegal.

**Methods:** A retrospective cohort study design was used. Adults aged more than 15 years who initiated ART between January 2007 and December 2018 were followed up for 12 months. Kaplan-Meier models were used to estimate the probability of mortality over time. Predictors of mortality were determined using Cox-regression models.

**Results:** We describe factors associated with mortality in 34451 HIV-1 infected adults who initiated ART in the study period in Senegal, out of which 69.43% were female (sex-ratio=0.4).

Globally 3023 (8.8%) died within 12 months post-HAART initiation. Mortality during the entire follow-up period was 7.9 deaths per 1000 adults-years

On multivariate analysis the baseline factors predictive of mortality were male sex (HR 2.7 (95% C.I. 1.6-4.4)); CD4 cells count less than 200 cells/mm<sup>3</sup> (HR 3.6 (95% C.I. 1.3-10.3)) ; WHO clinical stage 3 (HR 2.3 (95% C.I. 1.1-4.5)) ; WHO clinical stage 4 (HR 3.8 (95% C.I. 1.8-9.4)), never been on Cotrimoxazole chemoprophylaxis (HR 2.7 (95% C.I. 1.7-4.2)).

**Conclusions and Recommendations:** Poor baseline clinical and immunological characteristics were the main independent risk factor for death. Our results reinforce the importance of early HIV diagnosis using innovative task shifting strategies.

**Keywords:** HIV, Antiretroviral therapy, Mortality, Senegal

## TUPEC098

### Trends in Under-five Mortality Associated with Maternal HIV Status in Rwanda: Longitudinal Analysis of Demographic Health Surveys

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**Background:** Global under-five mortality (U5M) has declined substantially over the last 25 years. However, under-five mortality remains highest in regions of the world most affected by HIV/AIDS. The aim of this study was to assess trends in under-five mortality among children born to HIV-positive and -negative mothers in Rwanda over a 15-year period of HIV treatment scale-up.

**Methods:** Data were extracted from the 2005, 2010, and 2015 Rwanda Demographic Health Surveys. The primary outcome variable was under-five mortality during the five years preceding the interview as reported by the mother.

We used multilevel mixed random-effects linear regression with random effect and two levels to compare under five mortality among children born to HIV positive mothers and those born from HIV negative mothers over three time points of the demographic health surveys (2005, 2010 and 2015). The first level of analysis was the child and the second was the mother

**Results:** In total, 7827 children were included in this analysis, 416 of whom were born to HIV positive mothers. In 2005, mortality was 20% for children born to HIV positive mothers and 8.9% for children born to HIV negative mothers; in 2010, mortality was 13.5% for children born to HIV positive mothers and 6.2% for children born to HIV negative mothers; in 2015, mortality reduced to 5.4% for children born to HIV positive mothers and 4.3% for children born to HIV negative mothers. Compared to children born to HIV negative mothers in 2015, there was no significant difference in adjusted ratio of mortality for children born to HIV positive mothers. However, historically, we observed a significant converging trend in mortality between children born from HIV positive and HIV negative mothers in between 2005 to 2015.

The Adjusted Odds ratio for children born to HIV positive mothers compared to those born to HIV negative mothers has decreased from 1.10 [1.03-1.17] in 2005 to 1.08 [1.03-1.14] in 2010 and 1.02[0.98-1.06] in 2015.

**Conclusions and Recommendation:** While Rwanda has seen reductions in overall under-five mortality, since 2005, these reductions have been greatest among children born to HIV positive mothers. This may probably be due to the substantial gains made in Rwanda to scale-up coverage of health services, including antiretroviral therapy.

**Keywords:** Under Five mortality, HIV

## TUPEC099

### **Why Are Persons Living with HIV Dying? A Ten-year Mortality Analysis of National Data in Ghana**

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**Background:** Since Ghana introduced the highly active antiretroviral therapy in May 2003, a cumulative total of 83,712 PLHIV were alive and on therapy as at end of 2014. Even though there has been a lot of progress on HIV screening and treatment, patients are still dying including those on ART. In 2014 HIV related mortality among clients on ART accounted for 1,523 (2%). This study aimed at identifying factors associated with mortality among admitted PLHIV from 2005-2014 in health care settings in Ghana.

**Methods:** A retrospective data analysis from a representative sample of health facilities providing ART services was conducted through a review of in-patient registers, records and death certificates using a check list from January 1st, 2005 to December 31st, 2014. Data was entered and cleaned using Epidata statistical software package. Basic descriptive statistics on socio demographic characteristics and mortality trend analysis were computed.

**Results:** A total of 27,762 HIV-related admissions records were abstracted for the period of which majority 16, 898 (60.9%) were females. Of all the HIV positive patients admitted, 6,276 (22.6%) of them died on admission. Factors significantly associated with HIV related mortality included age (OR= 1.012, 95% CI 1.01-1.015), year of admission [2011 (OR=0.779, 95% CI 0.67- 0.91), 2012 (OR=0.645, 95%CI 0.55- 0.75), 2013 (OR=0.74, 95%CI 0.64-0.86) and 2014 (OR=0.665, 95%CI 0.57-0.76)]. Again, the odds of dying among females was lower than that of males ( OR= 0.81,95%CI 0.76- 0.86), clients without health insurance had 30% greater odds of dying (OR=1.298, 95%CI 1.20-1.41) and patients admitted to Regional ( OR=0.786, 95% CI 0.71-0.87) and District hospitals (OR=0.456,95%CI 0.42-0.495) had lower odds of dying than those admitted at Teaching Hospitals.

**Conclusions and Recommendations:** The study concludes that increasing age, being admitted before 2011, male gender, not having health insurance and being admitted to a Teaching Hospital are significantly associated with increased odds of dying among admitted PLHIV. Programmatic interventions should address health seeking behavior among males, assist and encourage PLHIV to enroll unto the National Health insurance scheme.

**Keywords:** PLHIV, Mortality, Analysis, Ghana

## TUPEC100

### **Morbidity and Mortality of HIV-infected Adults Admitted to the Medical Inpatient Service at a Public Tertiary Referral Hospital in Kisumu, Kenya**

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**Issues:** Persons living with advanced HIV infection are at high risk of morbidity and mortality. With the scale-up of antiretroviral therapy (ART), new infections and deaths have reduced: There is however need for early detection and treatment of opportunistic infection.

**Descriptions:** We performed a retrospective chart review of all adult patients admitted to the medical inpatient ward at Jaramogi Oginga Odinga Teaching and Referral Hospital (JOOTRH) from January 2016 to December 2018. Final clinical diagnoses and final outcomes were as recorded at discharge or death. Descriptive statistics were used to describe demographic, clinical characteristics and final diagnosis and outcome.

**Lessons learned:** During the 3-year period, there were 5,273 new admissions (unique patients) of whom 1,386 (26.2%) were patients living with HIV (640 males (46.2%) and 746 females (53.8%)). The median age for HIV-positive patients was 40 years (interquartile range (IQR): 30- 49 years) and 1,168 (84%) were on antiretroviral therapy (ART). Of the 218 not on ART, 40 (18%) had either stopped or defaulted treatment. Among HIV-positive adults admitted to hospital, the most frequent primary diagnosis at discharge or death was tuberculosis (TB) 183 (13%), meningitis 177 (13%), anaemia 154 (11%), pneumonia 135 (10%) and malignancy 129 (9%). Among patients with tuberculosis, 129 (70%) had pulmonary TB. Of those with meningitis, 17 (10%) had confirmed cryptococcal meningitis (positive CSF cryptococcal antigen). Of all malignancies, 34 (31%) were cervical carcinoma. A total of 469 (34%) HIV-positive adults died in the hospital, among whom 391 (83%) were on ART

**Next steps:** More than a quarter of all patients admitted to the medical in-patient service were HIV-positive. The majority of HIV-positive adults admitted were on ART. Opportunistic infections (OI), particularly tuberculosis, were still common among HIV-positive adults admitted to hospital. In-patient mortality was high suggesting the need for greater emphasis on in-patient management. Thorough routine screening for OI, anemia and cervical dysplasia remain critical interventions



## TUPEC101

### Rape Experience and Perpetrators among Secondary School Students in a Rural Community of Oyo State, Nigeria

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**Background:** Rape, a risk factor for HIV/AIDS, is of increasing concern among young persons worldwide and most cases are unreported. Its occurrence in the rural areas may go unnoticed partly due to the different socio-cultural context of the rural settlements as this may contribute to status of rural HIV infection. Understanding the burden and perpetrators in rural settings may inform interventions to reduce the problem. This study was conducted to assess the burden of rape, its perpetrators and associated factors among in-school young persons in a rural community in southwestern Nigeria.

**Methods:** A cross-sectional design was conducted using a 2-stage cluster sampling method. Data were collected using interviewer-assisted questionnaire on experience and perpetrators of rape among 640 students from 7 schools (4 public and 3 private schools). Data were analyzed with descriptive statistics and Chi-square at  $p=0.05$ .

**Results:** The mean age of respondents was  $15.5\pm 2.1$  years with M:F ratio of 1.2:1. About 13.0% had ever experienced rape. Perpetrators were friends (38.0%); strangers (21.0%), either of the parents (21.0%) and teachers (15.0%). However, 5.6% of the respondents reported themselves as perpetrators. A significantly higher proportion (17.5%) of those who had ever received education about rape experienced rape compared with 6.1% of those who had never been educated about rape ( $p < 0.001$ ).

**Conclusions and Recommendations:** Rape is prevalent in the rural areas and perpetrators spanned various categories of people. If there must be a world of zero new HIV infections, then there is a need for intensified efforts towards rape prevention.

## TUPEC102

### **Doubling Male Circumcision for HIV Prevention in Rwanda**

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**Background:** The Male Circumcision (MC) program in Rwanda has been significantly scaled up since its introduction in 2008 as an HIV prevention strategy. Currently, all 42 district hospitals across the country have trained staff that can provide MC services using both surgical and non-surgical methods. As a result, the national prevalence of MC increased from 13% in 2010 to 30% in 2015 among all ages. The 2018 Rwanda population-based HIV impact assessment (RPHIA) data were analyzed to estimate MC prevalence in 2019 and identify the factors associated with MC in Rwanda.

**Methods:** A two-stage sampling, cross-sectional population-based survey was conducted from October 2018 to March 2019. Data on the 13,821 men aged 15-64 who participated in the survey were analyzed. Circumcision status was defined by participants' self-report as circumcised or not circumcised. A multi-variable logistic regression was fitted to identify the factors associated with MC. Independent variables were considered in such age, education, residence, HIV status, wealth quintile etc. Tailored and stepwise methods were used for selection of co-variates, and all analyses were adjusted for survey study design and non-responses, using Jackknife method.

**Results:** Overall prevalence of MC was 42.8% (95% CI: 41.0, 44.7). The prevalence of MC was higher among the 20 to 24 years (59.7%, 95% CI: 56.9, 62.6); the never married (57.3%, 95%CI: 54.9, 59.6); those that reside in the city of Kigali (65.9%, 95%CI: 63.0, 68.7); and those with higher than secondary education (83.6%, 95% CI: 80.5, 86.3). MC prevalence was higher among HIV negative (43.1%, 95% CI: 41.2, 45.0) vs to HIV positive (26.1%, 95%CI: 21.2, 31.7) Factors associated with MC were age, level of education and province of residence; and decreased consistently with increasing age. The prevalence of MC was highest in the City of Kigali. For education, the higher level of education the more associated with MC.

**Conclusion:** MC coverage in Rwanda has significantly increased from 30% in 2015 to 42.8% in 2018, especially among young people. However, there is still a gap in MC coverage especially among men older than 45 years. There was a negative correlation between MC and HIV positivity reflecting the possible role of MC in reducing the risk of HIV infection and highlighting its value as a prevention area for service delivery focus.

## TUPEC103

### Impact of Rape on HIV Transmission in Enugu, South East Nigeria

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**Background:** The high incidence of rape and attempted rape worldwide has been reported to be a global health problem. In Nigeria with over 3.5m people living with HIV in 2015, rape expectedly presents an increased risk of HIV spread as the violent act is often carried out without protection. This study was aimed at determining the HIV sero-prevalence and sero-conversion rate among rape victims in Enugu and its environs, South Eastern Nigeria.

**Methods:** This study was carried out at TAMAR Sexual Assault Referral Centre (TAMAR SARC) Enugu between June 2014 and July 2016. TAMAR SARC is a joint initiative of Women Aid Collective (WACOL) in partnership with Enugu State Ministries of Health, Gender and Social Development, Enugu State Agency for the Control of AIDS (ENSACA) and supported by J4A programme of Department for International Development (DFID). Blood samples were collected after a detailed history and obtaining consent from rape victims who presented at the centre. The samples were tested for HIV using Rapid Test Kits (RTK) and other sexually transmitted infections at presentation. Victims who tested negative to HIV had their test repeated at 2 weeks, 4 weeks and 3 months after presentation. Data were entered and analysed using SPSS version 16.

**Results:** A total of 561 victims were examined. 552 (98.4%) were female while 9 (1.6%) were male. In the first test, 4 (0.98%) respondents out of 410 screened were seropositive for HIV. Out of the 406 negatives, 210 presented after 72 hours and did not receive Post Exposure Prophylaxis (PEP) while 196 were given PEP. At 3 months post assault screening, 90 (22%) were sero-positive. Out of 90 respondents who had sero-conversion, 80 did not receive PEP. 286 (50.9%) out of 410 screened were positive for other sexually transmitted infections.

**Conclusions and Recommendations:** Rape poses a great risk of HIV transmission. Therefore, future research and advocacy should focus on improving the community response and the prevention of rape, while early reporting by rape victims for immediate commencement of PEP is highly recommended.

**Keywords:** Rape, HIV sero-prevalence, Post-exposure prophylaxis

## TUPEC104

### VIH et Facteurs de Risque Associés chez les Travailleuses du Sexe (TSF) en Côte d'Ivoire

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**Background:** L'épidémie du VIH affecte de façon disproportionnée les travailleuses de sexe féminin (TSF) par rapport à la population générale. Comprendre les facteurs de risque associés au VIH chez les TSF est capital pour mieux orienter les programmes de santé publique. Le but de ce travail est d'analyser les facteurs bio-comportementaux associés à la prévalence du VIH chez les TSF en Côte d'Ivoire.

**Methods:** A travers une enquête transversale bio comportementale basée sur l'échantillonnage espace-temps conduite en Côte d'Ivoire d'Avril à Juillet 2016 des données ont été collectées chez les TSF. A travers la version 15.1 de STATA, Nous avons recouru aux méthodes une analyse descriptive uni variée et bi variée a été réalisée. Lorsqu'une corrélation est identifiée, une analyse multivariée par régression logistique est effectuée pour identifier les facteurs significativement associés au VIH.

**Results:** La prévalence du VIH est de 3.43% (7/204), 5.34% (29/543), 10.02% (47/469) et de 22.89% (111/485) respectivement chez les TSF de 18-19ans, 20-24ans, 25-29ans et 30 et plus (CHI<sup>2</sup> 96.76 P< 0.001). Par rapport au niveau d'instruction, la prévalence du VIH était de 16.40% (73/445) chez les TSF n'ayant aucun niveau d'instruction, 12.98% (57/439) primaire, 9.35% (43/460) secondaire 1<sup>er</sup> cycle et 5.88% (21/357) secondaire 2<sup>eme</sup> cycle (CHI<sup>2</sup> 24.79 P.< 0.001). La prévalence du VIH chez les TSF en union est de 15.41% (45/292) et celle non en union 10.54% (149/1413) (CHI<sup>2</sup> 5.68 P.= 0.017). Après avoir testé différentes variables dans une régression multivariée logistique, plus les TSF sont âgées plus la prévalence du VIH est élevée (OR : 4.38, IC95% 2.46 - 7.80), les TSF infectées par MG ont près de 2 fois plus de risques de contracter le VIH par à celles qui n'en n'ont pas (OR: 1.90, IC95% 1.22- 2.95). En revanche, plus les TSF ont un niveau d'instruction élevé, moins elles sont exposées au VIH [OR : 0.49, IC95% 0.26-0.93]. Les TSF non en union sont moins a risque de contracter le VIH par rapport à celles qui sont en union [OR : 0.61, IC95% 0.39-0 .97] (CHI<sup>2</sup> 98.02 P. ≤ 0.001 R<sup>2</sup> = 0.1229).

**Conclusions and Recommendations:** La prévalence du VIH est encore élevée chez les travailleuses du sexe. L'âge en lien avec la durée dans la profession du sexe, l'infection au Mycoplasma Genitallium et l'antécédent d'IST, sont associés au risque d'exposition au VIH. Par contre, un niveau d'instruction élevé constitue un facteur de protection contre cette infection.

## TUPEC106

### **Sex Work and Injecting Drug Use Increasing HIV Infection Risks among Male Sex Workers in Nairobi? Evidence from HOYMAS Community Led HIV Clinic Data**

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**Issues:** Male Sex Workers who also inject drugs in Nairobi County, Kenya are shying away from accessing HIV and STI prevention services including HIV Testing and Counseling compared to their counterparts who do not inject drugs. This happens against the backdrop of the reality of the disproportionately high HIV prevalence among male sex workers. Male sex workers who inject drugs face double the risk of HIV infection faced by non-drug injecting male sex workers. Over the last five years Health Options for Young Men on HIV/AIDS and STIs (HOYMAS) has in addition to providing community led comprehensive HIV prevention and treatment services male sex workers.

**Descriptions:** A cross sectional analysis of data from 75 male sex workers who also reported to be injecting drug users shows that male sex workers who inject drugs had even a much higher HIV prevalence than male sex workers who do not inject drugs. The data was obtained from the HOYMAS community clinic records for 2016, 2017, and 2018.

**Lessons learned:** All the 75 male sex workers reported that they are injecting drug users and have engaged in unprotected sex with their partners and clients in the last six months prior to seeking services from the clinic. Male sex workers who do not inject drugs had HIV prevalence of 24.6%. However, the analysis of the 75 male sex workers who are also inject drugs revealed that the HIV prevalence among this group was 35.5%. The high HIV infection among male sex workers who are injecting drug users can be independently linked to the high number of sex work clients and high incidents of syringe sharing among male sex workers drug injecting user networks.

**Next steps:** Male sex workers who are also drug injecting users in Nairobi County face astronomical risk of HIV infection and transmission particularly in incidents of low condom and lubricant usage and high syringe sharing. There is need for a renewed effort to design innovative strategies HIV prevention strategies to target male sex workers who are also injecting drug users.

## TUPEC107

### Concordance of Self-reported HIV Status and Detectable Antiretrovirals and Undetectable Viral Load in the Zimbabwe Population-based HIV Impact Assessment (2015-2016)

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**Background:** Stigma associated with HIV disease may discourage individuals from disclosing their HIV-positive status, thereby complicating the interpretation of survey data. As this data is critical for HIV programming, it is important to understand the bias introduced through self-reported status. The presence of antiretrovirals (ARVs)/ a suppressed viral load suggests that some persons living with HIV (PLHIV) may be on treatment thus known HIV-positive. Serum ARV drug levels and undetectable viral load were used to validate self-reported status among participants of a nationally representative HIV impact assessment in Zimbabwe.

**Methods:** ZIMPHIA collected blood specimens for HIV testing from 22,501 consenting adults aged 15+. ARV drug level and viral load testing was conducted on 3,420 and 3,443 HIV-positive samples respectively. All analyses are weighted to account for complex survey design. Logistic regression was used to identify associations between a self-reported negative/never tested HIV status with the presence of either serum ARVs or a suppressed viral load (< 1000 copies/ml) among PLHIV.

**Results:** Plasma ARVs were present in 13.6% of samples from PLHIV who self-reported HIV-negative/never tested. Discordant self-report and plasma ARVs were documented in 11.3% of PLHIV 15-19y and 7.1% 20-24y vs. 2.7% aged 30-49y. PLHIV 15-19y and 20-24y had 4.62 (95% Confidence Interval (CI): 2.32-9.18) and 2.77 (95% CI: 1.08-7.09) times the odds of self-reporting HIV negative/never tested and having plasma ARVs present vs. PLHIV 30-49y. A suppressed viral load was documented in 14.1% of samples from PLHIV who self-reported HIV-negative/never tested. PLHIV 20-24y and 25-29y had 2.87 (95% CI: 1.24-6.66) and 2.72 (95% CI: 1.29-5.73) times the odds of discordant viral load and self-report results vs. persons 30-49y. No associations were observed with either outcome and gender, province, urban/rural residence, education, or wealth quintile.

**Conclusions and Recommendations:** Survey data relying on self-reported HIV status may overestimate HIV prevalence of newly diagnosed individuals when combined with HIV testing. Surveys including self-report among adolescents/young people may be more impacted and should be considered when interpreting findings. A suppressed viral load may be used to identify PLHIV with known status who self-report negative/never tested however some may result from elite control rather than discordant self-report.

## TUPEC108

### **Prévalence Élevée et Facteurs Associés à la Dissociation Immunovirologique chez les Patient sous Traitement Antirétroviral à l'Hôpital de Jour de Donka, Guinée**

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**Background:** Les patients sous traitement antirétroviral (TARV) peuvent présenter une réponse immunitaire partielle malgré une charge virale indétectable. L'objectif de ce travail était de déterminer la prévalence de la dissociation immunovirologique (DIV) et les facteurs associés.

**Methods:** Nous avons réalisé une étude rétrospective sur une durée de 3 ans (1<sup>er</sup> janvier 2015- 31 décembre 2017) chez les patients sous TARV à l'hôpital de jour de Donka. La DIV a été défini par une charge virale indétectable (< 50 copies/ml) et un taux de Lymphocytes T CD4<sup>+</sup> de moins de 200 cellules/mm<sup>3</sup> après 6 mois de TARV. Les données recueillies ont été socio-démographiques, cliniques, biologiques et thérapeutiques. Les données ont été analysées à l'aide du logiciel Epi-info 7.2. Les tests de Chi2 et de Student ont été utilisés pour un seuil de signification de 0,05. Une régression logistique a été utilisée pour analyser les facteurs associés.

**Results:** La prévalence de la DIV était de 34,57% [IC95 : 28,60-40,91] dont 23,87% de dissociation immunologique (DI) et 10,7% de dissociation virologique (DV). L'âge moyen était de 38,77±11,30 ans. Le sexe féminin prédominait (66,26%) avec un ratio de 0,51. Les combinaisons thérapeutiques étaient à base de TDF+3TC+EFV (96,31%). Les patients au stade 3 et 4 OMS étaient de 86,01%. Les facteurs associés à DIV était, le sexe féminin (Odds ratio= 3,1 p=0,006), le taux de LTCD4<sup>+</sup> initial < 200 cellules/mm<sup>3</sup> (Odds ratio=5,97 p=0,0009).

**Conclusions:** Ce travail nous a permis de déterminer la prévalence de la dissociation immunovirologique et les facteurs pouvant être associés.

**Mots clé:** VIH, TARV, Dissociation immunovirologique, Facteurs associés, Guinée

## TUPEC109

### Hormonal Contraception and Women's HIV Acquisition Risk in Rwandan Discordant Couples, 2002-2011

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**Background:** After the ECHO trial results were recently released, the WHO reiterated the need to synthesize additional evidence, including from rigorous observational studies, regarding the impact of hormonal contraceptives on risk of HIV acquisition.

**Methods:** From 2002-2011, a cohort of jointly tested HIV discordant couples in Kigali, Rwanda were followed longitudinally. At quarterly visits: sociodemographic and clinical data were collected, family planning methods were provided, and HIV-negative partners were tested. Couples were censored at antiretroviral treatment initiation. Multivariate Cox models evaluated associations between time-varying contraceptive methods and HIV acquisition in women. Sensitivity analyses explored: censoring for pregnancy intervals and at first method switch, possible exposure misclassification, and time-varying confounder mediation.

**Results:** Among 839 discordant couples, 45 incident infections occurred in women over 1704.5 couple-years (2.6 infections/100 couple-years; 95%CI:1.9-3.5). Models showed that neither time-varying injectable (adjusted hazard ratio [aHR]=2.1; 95%CI:0.8-5.6) or implant (aHR=0.4; 95%CI:0.1-3.5) use were significantly associated with HIV acquisition relative to non-hormonal contraception. The model controlled for the following factors which were associated ( $p < 0.05$ ) with HIV acquisition: higher baseline viral load of the male partner (aHR=2.5) and time-varying: STIs in the woman including gonorrhea, trichomonas, chlamydia (aHR=6.3); genital inflammation in the woman due to bacterial vaginosis, candida, or other cause (aHR=7.2); genital ulceration in the woman due to syphilis, HSV-2, or other cause (aHR=9.4); and report of condomless sex with the study partner (aHR=4.5). Sensitivity analyses showed similar findings. The effect of oral contraceptives could not be estimated due to small sample size.

**Conclusions:** We found no association between injectable contraception or implant and HIV acquisition in women relative to non-hormonal method use. These findings underscore the need for integrated HIV and family planning services, integrated gynecological and HIV services, and support that women should be offered the complete method mix. Condoms should always be recommended for HIV discordant couples. HIV testing of sex partners together is critical to establish HIV risk, ascertain couple fertility intentions, and counsel appropriately.



## TUPEC110

### 90-90-90 Goals Achieved in a High HIV Prevalence Setting of Western Kenya

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**Background:** Since 2014, Médecins sans Frontières has supported the Ministry of Health on HIV activities in Ndhiwa sub-county (Homa bay County, Kenya) with extended community HIV testing and increased access to quality HIV care through decentralization of antiretroviral therapy ART diagnosis and treatment from hospital to health facilities. In 2016, the country adopted universal ART initiation regardless of CD4 count ("Universal Test and Treat"). We evaluated changes in the HIV cascade of care coverage at population level between 2012 and 2018.

**Methods:** Two cross-sectional population-based surveys were conducted in Ndhiwa sub-county in 2012 and 2018. Using a two-stage cluster sampling, we recruited individuals aged 15-59 years at household level. Those who consented to participate were interviewed and tested for HIV at home. All HIV-positive participants had their VL measured regardless of their ART status.

**Results:** In total 6,076 and 6,029 individuals were included in the surveys conducted in 2012 and 2018 respectively. Overall HIV prevalence was 24.1% (95% Confidence Interval (CI): 23.0-25.2) in 2012 and 16.9% (95%CI: 16.0- 17.9) in 2018. Overall, HIV testing coverage increased from 79.5% (78.4- 80.5) in 2012 to 95.8% (95.3- 96.3) in 2018. Overall achievement of the 90-90-90 goals was 59.6/68.2/82.5 in 2012 compared to 93.4/96.9/95.2 in 2018. The 90-90-90 coverages among women were 61.8/65.3/81.9 in 2012 and 93.0/97.0/96.3 in 2018. The 90-90-90 coverages among men were 54.9/75.4/83.8 in 2012 vs 94.4/96.6/92.5 in 2018. In total 39.7% (542/1,365) of all HIV positive participants had a VL < 1,000 copies/ml in 2012 compared to 87.0% (882/1,014) in 2018.

**Conclusions and Recommendations:** The 90-90-90 targets were achieved in Ndhiwa. Overall HIV-positive status awareness, ART and viral load suppression coverages significantly improved between 2012 and 2018 in women and men. Moreover the proportion of HIV-positive individuals with VL < 1,000 copies/ml in the whole population significantly increased over time.

## TUPEC111

### Effect of Seroconcordance on HIV Incidence in Rural South Africa: Evidence from Agent-based Simulation Modelling

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**Background:** Serosorting has been shown as an adapted strategy to potentially reduce the risk of HIV transmission by partnering with an individual of the same HIV status (i.e. seroconcordance). In generalized settings, seroconcordance can occur both intentionally and unintentionally, given the very high HIV prevalence. Using the detailed behavioral and cohort data in heterosexual couples over 30,000 sexually active adults from a rural community in South Africa, we evaluated the population-level effects of serosorting on HIV incidences by partnership and HIV status using agent-based simulation modelling.

**Methods:** We developed an individual-based model parameterized to the data derived from a study population, the Africa Health Research Institute (AHRI) surveillance, which is an open population cohort with linked HIV surveillance data and detailed information on changes in household memberships since 2003. Parameters estimated from the AHRI cohort included total numbers of males and females, HIV prevalence per year, HIV incidence, and total numbers of partnerships formed during the study period. The model is a yearly time-step in which HIV transmission is simulated per year based on the HIV prevalence for males and females, as well as partnership formation.

**Results:** We estimated that the percentage of positive and negative seroconcordant partnerships would be 10% and 25% in the observed surveillance, compared to 5% and 22% under the assumption of complete random partnership formation. The percentage of serodiscordant relationship was 6%, compared to 8% without "seroconcordance" behaviours. HIV incidence in serodiscordant couples was reduced by about 25%, from 6.1 per 100 person-years (PYs) with no seroconcordance behaviour to 4.8 per 100 PYs assuming seroconcordance behaviour is present.

**Conclusions and Recommendations:** Here, we quantified the high degree of seroconcordance in a rural community in South Africa and found that patterns of partnership formation are not random in this HIV endemic setting. HIV-positive individuals were more likely to initiate stable conjugal relationships with partners who were also HIV-positive. This behavior substantially reduce HIV incidence in stable couples. We have therefore built a platform for future work to understand the implications of seroconcordance for HIV incidence and transmission at the population level, and to explore intervention options that can leverage seroconcordance to promote better long-term health outcomes

## TUPEC112

### **Awareness and Disclosure of Status and Undetectable Viral Load in HIV-serodiscordant Couples: Evidence from Population-based HIV Impact Assessments**

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**Background:** People living with HIV who are adherent to antiretroviral therapy (ART) and have undetectable viral load (UVL) have zero risk of transmitting HIV to their uninfected sexual partner. We pooled data from four cross-sectional, population-based HIV impact assessment (PHIA) surveys conducted in Tanzania, Malawi, Zambia and Zimbabwe to describe awareness of HIV+ status, disclosure of HIV+ status and UVL among HIV-serodiscordant couples where the man is HIV+.

**Methods:** We included 15,815 HIV- females (15+ years) who could be linked to cohabiting HIV+ male sexual partners, both with laboratory-confirmed HIV status. In the PHIA survey, consenting participants were tested for HIV, antiretrovirals and VL. Awareness of HIV+ status was based on self-report or detection of antiretrovirals. Using plasma samples primarily, UVL was defined as < 200 HIV RNA copies/mL. Prevalence ratios, using weights accounting for complex survey design, were used to describe associations with UVL in the HIV+ partner.

**Results:** Among HIV- women, 3.2% had an HIV+ partner. Among the HIV+ partners, 54.8% (95% confidence interval (CI):49.2-60.5) were aware of their HIV status and 41.8% of these (95%CI:35.6-48.1) had UVL. Most (60%) women reported not knowing their partner's HIV+ status. HIV- women who reported knowledge of their partner's HIV+ status (tested together) were 1.6 times (95%CI:1.3-1.9) more likely to have male partners with UVL compared to women who were unaware of their partner's status. Among HIV+ men who are aware of their status, 73% reported disclosing their status to their HIV- female partner and these men were 1.2 times more likely (95%CI:0.9-1.5) to have UVL compared to those who did not disclose their status.

**Conclusions and Recommendations:** A substantial proportion of HIV+ men in serodiscordant partnerships were unaware of their HIV+ status, had detectable VL and have partners who were unaware of the man's HIV-positive status, thereby increasing the HIV- female's risk for HIV acquisition. In our analysis, UVL is associated with the male seropositive partner's awareness and disclosure of status, and the seronegative partner's accurate knowledge of that status. These results strengthen the evidence that knowledge of HIV+ status between couples represents an important opportunity to reduce transmission in serodiscordant relationships through interventions such as index testing and pre-exposure prophylaxis.

## **TUPEC113**

### **Examining the Findings of Exploration Study on *Substance Abuse and Sexual Risk Behavior among Young People Aged 15-24 in Zanzibar***

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**Background:** Substance abuse, use and risky sexual behaviors are public health problem among young people aged 15-24 in Zanzibar.

**Methods:** This is a cross-sectional study using snowball design conducted in 2018. A sample of 420 young people aged 15-24 enrolled. The mixed data collection techniques including tools, FGDs, observations, Key informant and in-depth interviews were used. Data collectors were trained and field pretesting of tools conducted. Generated data were checked for completeness, cleaned using Microsoft excels and analyzed using Epi-info version 7 software.

**Results:** The findings revealed that, 57.2 % of young people are using more than one substance, and this tendency increases with increased age, where 47.8% of 15-19 years to 63.6% of 19-24 years at  $X^2=11.4$ ,  $P=0.0007$  use different substances. The in-depth interviews revealed that, 99.7% (n= 392/393) of respondents mentioned marijuana as the most commonly used by youth, while n=288/289 (99.65%) of respondents used human medicines like sedatives with Valium or diazepam, Cetirizine and piriton at [68.75% (n=185; and 20.30% (n=81) used crack cocaine, and 81.2% (n=324) used alcohol. The FGDs have revealed that, 78.3% (n=47/60) of boys aged 15-19 perceived marijuana, cocaine, heroin, alcohol and tobacco as the common substances.

The 15-24 group has found vulnerable of contracting HIV infection and viral hepatitis due to their engagement in unprotected sexual acts, peer pressure, seeking sense of belonging, poor parenting, poor social coping skills, acceptability of drug-abusing behavior in school and community environments, influences from school mates, betrayal by a spouse and sexual partner, the loss of biological parent, and Psychological frustrations.

**Conclusions and Recommendations:** Zanzibar continues to mitigate the situations through the recovery oriented system of care, community-based HIV interventions, sober houses, and vocational skills, provision of MAT, detoxification and peer based self-help group approach.

## TUPEC114

### Clinical Features of Viral Diarrhea in the Children with HIV

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**Background:** Viral diarrhea is the leading cause of uncertain etiology of acute intestinal infections. According to international statistics, 50-80% of diarrhea is viral diarrhea.

**Methods:** The study involved 30 children aged between 1 and 18 years who were treated at the Republican AIDS Center. Clinical, virological, bacteriological, serologic (PCR) methods were used.

**Results:** The study showed that viral diarrhea is more prevalent in children under the age of 3 years with HIV. 21 (70%) of the 30 children with diarrhea have been diagnosed with viral etiology. Viral diarrhea was caused in 16 children (76.2%) by rotavirus while normal diarrhea with normal Herpes type 2 (9.5%) and adenovirus diarrhea 1 (4.76%), 2 (9.5%) patients had mixed etiologic viral diarrhea. The most severe diarrhea was rotavirus diarrhea, with strong symptoms of intoxication and symptoms of multiple vomiting in children. Catarrhal signs in the rotavirus diarrhea were more susceptible to adenovirus diarrhea. The body temperature rose slowly and reached 39.1 ° C until 4-5 days before the onset of the disease. In the diarrhea clinic with a normal herpes virus, multiple seizures (more than 10 times) occurred suddenly on the background of sub-febrile body temperature. The return was  $5.2 \pm 1.8$  days, the fecal matter was fluid and was observed 1-2 times a day. Intoxication syndrome did not prevail. Mixture-related viral diarrhea has been a bit worse than mono-infection and has continued for a long time.

**Conclusions and recommendations:** Thus, according to the results of the study, ethylogically rotavirus was the leading cause of viral diarrhea in HIV-infected children. Diarrheal syndrome prevailed over vigor and vomiting. Diagnosis of viral diarrheal viral infections in children with HIV indicates the need for better laboratory diagnosis.

## TUPEC115

### Prevalence of Mother to Child HIV Transmission among HIV Exposed Children in Bahir Dar, Northwest Ethiopia

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**Introduction:** Mother-to-child transmission (MTCT) of HIV accounts up to 9% of new infections. MTCT of HIV occurs during pregnancy, delivery or breastfeeding and it is the leading source of HIV infection among children below the age of fourteen. Despite the impact of the problem, data on the prevalence of mother to child HIV transmission and its predictors are limited in the study area. Therefore, the main objective of this study was to determine the prevalence of mother to child HIV transmission using polymerase chain reaction (PCR) based technique.

**Methods:** Across sectional study was conducted from 1st February to 30th July 2018 among HIV exposed children in health facilities of the Bahir Dar City administration. A Dried Blood Sample (DBS) was collected using what man 903 DBS card from the child finger, toe or heel. Abbott m2000sp and Abbott m2000rt PCR machine was used for PCR molecular technique to determine the HIV status of the child. Structured questionnaire was used to generate demographic related data. Data were entered and analyzed using SPSS version 23. Descriptive statistics was used to present and summarized the findings.

**Results:** About 261 HIV exposed children and their HIV positive mothers were included in the study. Of the total enrolled mothers 210(80.5%) gave birth in the hospital, 192(73.6%) had spontaneous vaginal delivery, 139(53.3%) were at HIV/AIDS stage I and 10(3.8%) didn't get prevention of mother to child HIV transmission (PMTCT) services. Out of the HIV exposed children 136(52.1%) were females, 72(27.6) had age less than six months, 65(25%) were underweight, 198(76%) served exclusive breast feeding before 6 months and 9(3.4%) didn't get Antiretroviral (ARV) or infection prevention prophylaxis. The overall prevalence of mother to child HIV transmission was at 2.7% (7/261). All the 7(100%) HIV positive children were born by spontaneous vaginal delivery, 5 (71.4%) were born from mothers who had started ART during pregnancy or after delivery. Similarly, about 6 (85.7%) HIV positive children were from mothers who had an elementary or high school education.

**Conclusions:** This study showed otherwise a relatively low prevalence of mother to child HIV transmission among HIV exposed children. Large-scale study with adequate sample size is warranted.

**Keywords:** MTCT, PCR, DBS, Maternal HIV infection

## TUPEC116

### Fertility Desires, Knowledge and Use of Modern Contraceptives among HIV Positive Women in Douala, Cameroon

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**Background:** Globally, 36.9 million people were living with HIV in 2017. 2/3 are female of reproductive age. Approximately 3 million children and adolescent < 20 years infected worldwide. 4000 newly infected children in Cameroon from MCT per year. The risk of MCT can be reduced by contraceptive use. Modern contraceptive use remains an important public health intervention to reduce unintended pregnancies and decrease risk of mother to child transmission of HIV. Despite these benefits, reports show low use among reproductive-aged HIV positive women with no fertility desire.

**Methods:** This study was a descriptive cross-sectional hospital-based study. The target population were HIV positive women aged 15 to 49 years followed up in 3 Treatment centers of the Deido health District Hospital, Douala. Data were collected of eligible participants using an interviewer administered questionnaire. Data was entered using epi info version 3.1. Statistical analysis was done using the STATA version 15 on windows. bivariate analysis and multivariate analysis done. Level of significance was considered < 0.05.

**Results:** We enrolled 382 participants with mean age of 35.56 years. Majority were in a relationship but not married, Christians and unemployed. More than half of our participants (55%) had fertility desire. Being in couple, employed, seronegative partner and partner desire for a child were predictive of this desire.

The level of knowledge of modern contraception was 99% and use of modern contraceptives at time of our study at 37.4%. With an unmet family need of 44%. The major source of information were friends and relatives. The most preferred method being condoms followed by injectable contraceptives. Younger age and seronegative partner were predictive of FP use in these women. Being single, desire for a child and partner's prohibition were major reasons for non-use of modern contraceptives at the time of study.

**Conclusions:** There is a high desire for childbirth among HIV positive women. Knowledge on modern contraception was high with a high unmet FP need. Age was a major factor which influenced both fertility desire and use of modern contraceptives. Male partners had an important role to play as to whether their female partners used or not these methods. Based on these findings we recommend a program that focuses on promoting use of these methods by HIV infected women especially with no fertility desire and education of male partners on modern contraceptives.

## TUPEC117

### **Predictors of HIV/AIDS Preventive Behavior among College Students in Gambella Town, Southwest Ethiopia Using Health Belief Model**

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**Background:** Safer sex behaviors (sexual abstinence, correct and consistent condom usage) are important for prevention of sexually transmitted diseases and HIV/AIDS among college students. The purpose of this article was to review studies addressing determinants of safer sex behaviors among college students. In Ethiopia little or no data existed on the preventive behaviors of HIV/AIDS among college students. Therefore, this study aimed to assess HIV/AIDS preventive behavior and associated factors among college students in Gambella town.

**Methods:** An institution based cross-sectional study was conducted from 2nd to 4th March, 2015 using self-administered questioners. Pretest was conducted before the actual data collection and reliability test was performed. EPI DATA version 3.1 and SPSS version 21 software were used for data entry and analysis, respectively. Descriptive statistics were computed and a multivariate logistic regression model was fitted. P-value less than 0.05 were used to declare statistical significance.

**Results:** 670 college students participated in this study. The study identified that, 72.1% of the students had HIV/AIDS preventive behaviors. Among sexually active students, 83(30.6%) were using condom consistently in the last 12 month and 59.7% of the college students had no sexual intercourse. Being engaged in HIV/AIDS, preventive behavior was determined by age  $\leq 19$  years (AOR=1.89, 95% CI: 1.29, 2.77), good HIV related knowledge (AOR=2.48, 95% CI: 1.46, 4.09) and drinking alcohol (AOR=0.51, 95% CI: 0.35, 0.73). High perceived severity toward HIV/AIDS and high perceived benefit of engaging in HIV/AIDS preventive behavior (using of condom) also predicted HIV/AIDS preventive behavior (AOR=1.65, 95% CI: 1.12, 2.59) and (AOR=2.35, 95% CI: 1.36, 2.93), respectively.

**Conclusions and Recommendations:** HIV/AIDS preventive behavior of college students in Gambella was high. However, inconsistent condom use among sexually active students was highly practiced. Age, knowledge of HIV/AIDS preventive behavior, alcohol use, perceived severity and benefit had a significant effect on HIV/AIDS preventive behavior of the college students.



## TUPEC119

### **Adolescent-to-Adolescent Strategy to Find New HIV-infected Vulnerable Adolescents and Young Women in Four Provinces of Burundi**

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**Issues:** The HIV status of many adolescent girls and young women remains unknown in Burundi, resulting in their exclusion from the HIV care continuum

**Descriptions:** Evaluation of adolescent-to-adolescent approach to identify new HIV-positive cases among girls 10-18 years old. It is a mix of index case-finding and snowball sampling implemented among 175 HIV-positive girls (aged 10-18) (seeds) enrolled in a case management and mentorship program, and who listed their community networks that included friends (girl and boy), relatives (youth or adult), and sexual partners. People listed were divided into female and male groups. We used the Rao-Scott Chi-square test with p-values < 0.05 to test the significance of the differences in HIV positivity rate and yield of 5,460 girls (5,122 undiagnosed girls who received HIV testing services and 338 girls already known positive) enrolled in the program, with those of 378 female and 141 male listed in the community networks and receiving an HIV test.

**Lessons learned:** A total of 661 individuals (484 females and 177 males) were identified through the seed community networks, an average of 4 individuals per seed. The HIV positivity rate was significantly higher for the female community networks (using Adolescent-to-Adolescent method) than the systematic HIV testing services (26.9%, n=484 vs. 9.1%, n=5,460, p< 0.05) as was the yield (14.3%, n= 378, vs. 3.6% n=5,460, p< 0.05). The HIV positivity rate was significantly higher among own daughters (66.7%, n=3) than mothers/female caregivers (45.9%, n=144), female adolescent friends (33.1%, n=163), female room-mates (25.0%, n=4, p < 0.05), sisters (12.9%, n=101, p< 0.05), and female neighbors (4.2%, n=24, p< 0.05). The yield was significantly higher among female adolescent friends (37.6%, n=120) and own daughters (33.6%, n=3) than female room-mates (25.0%, n=4, p< 0.05), female neighbors (10.0%, n=10, p< 0,05), sisters (6.9%, n=87, p< 0.05), and mothers (0.0%, p< 0.05). Among male community networks, the HIV positivity rate was significantly higher among sexual partners (82.9%, n=35) than fathers (55.1%, n=49, p< 0.05), and uncles (16.0%, n= 25, p< 0.05). No new HIV positive male community networks were tested

**Next steps:** Adolescent-to-Adolescent provides a best opportunity for reaching hard-to-reach vulnerable girls. When coupled with a case management and mentorship program, it presents a promising strategy for reducing the vulnerability to HIV in adolescent girls and young women

## TUPEC121

**The Demographic Group Determining the 90-90-90 Attainment. A Systematic Analysis in Eswatini**  
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**Background:** The Kingdom of Eswatini has made significant strides in the fight against the HIV/AIDS epidemic. In light of the 90-90-90 strategy, which is a global ambitious treatment target to help end the aids epidemic, Eswatini seems online of achieving it. The country has managed to avert over 70,000 AIDS-related deaths since the introduction of ART in 2003. Since the call of His Majesty that HIV is every Swazi's business, the efforts have not changed. The government, chiefdoms, CSOs and religious sectors have joined hands to find HIV/AIDS as per the Royal Command. The country is striving to end AIDS by 2022. General indication shows that the 90-90-90 target is an achievable task by the Kingdom of Eswatini, as such it has increased the targets to 95-95-95. However, an in-depth analysis presents some areas where much efforts and innovations are required.

**Methods:** The systematic analysis of the demographic groups determining the attainment of the 90-90-90 targets in Eswatini was prepared in stages: desk review and analysis, consultations/interview meetings with key stakeholders, data analysis and compilation of the report.

**Results:** Eswatini has reduced the HIV incidence by 44%. An estimated 84.7% of people living with HIV are aware of their status, 87.4% of all who know their status are enrolled on ART, and about 91.9% of those on ART are virally suppressed. HIV incidence among adults ages 15-49 years is 1.15%, as compared to 1.93% for the 15-24 years. HIV incidence is also significantly higher amongst young Emaswati females (15-19 years) compared to the males same age group standing at: 1.70% for females compared to 0.04 for males. Whilst between the 20-24 years HIV incidence is 1.94% for females and 0.44% for males. The age group 15-24 seem to be the determining factor for the country to reach the 95-95-95 target, as they are currently the lowest at 67.5%, 88.5% and 70.25% respectively.

**Conclusion:** There is urgent need for effective youth focused and led interventions. Programmes should immediately ensure that young people and community are engaged not as beneficiaries but stakeholders. The style and principles of programming should ensure planning with not for beneficiaries.

## TUPEC122

### **DREAMS Initiative- an Alternative Approach for Reducing New HIV Infections among the Most At-risk Adolescent Girls and Young Women (AGYW)**

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**Issues:** In Zambia, adolescent girls and young women (AGYW) remain disproportionately affected by HIV compared to their male counterparts due to factors such as early sexual debut, sexual and gender-based violence and intergenerational sex. More females (13.6%) than males (8.5%) are living with HIV due to imbalances in life (NASF). Estimated HIV prevalence rates among adolescent girls and boys aged 15-19 is at 3.5 per cent for girls and 1.8 per cent for boys (NASF). AGYW have difficult access to SRH and HIV services due to barriers of attitude and stigma by providers and society.

**Descriptions:** DREAMS provides a comprehensive package of high impact HIV and SRH services to most at risk AGYW. This includes; HIV prevention messaging, HIV testing, PrEP, condoms, family planning and linkage to post GBV care. Economic strengthening and school enrollment support are promoted to lower vulnerability to HIV. Active case finding and escorted referral strategies are used to increase uptake for HIV and post GBV care services. AGYW receive services at DREAMS Centers, in Safe Spaces and health facilities.

**Lessons learned:** In 2019, 165,980 AGYW in high HIV burden districts were reached with HIV prevention services. 55% of those were aged between 15-24. Among these, 34% reported to be sexually active. Program data indicated out of the sexually active AGYW, 65% did not use condoms during sex and did not know their partners' status. In 2016, service uptake for HTS, condoms and family planning was 22,599, 82,615 and 5,934. Service uptake significantly increased to 52,334, 327,373 and 13,758 in the following year. A total of 5,048 AGYW (28%) who reported not knowing their HIV status accessed HIV testing services at the DREAMS Centers. Data revealed 26,715 AGYW were engaged in sexual activities with 45% reporting using condoms after joining DREAMS. 14,897 AGYW have been provided educational bursary to enable them to remain in school through DREAMS. Program data shows that 29% of the 15-24-year-old AGYW received money in exchange for sex and abused alcohol. DREAMS is responding by providing economic support to AGYW through group savings, financial literacy and business startup. A total of 21,373 AGYW have been trained in financial literacy as at June 2019.

**Next steps:** DREAMS will continue to provide integrated services to AGYW. The standard primary prevention package will be enhanced with GBV messaging for 9-14 year olds. DREAMS will continue to work with communities and local government to enhance ownership and sustainability

## TUPEC123

### The Status of Adolescent Testing and Treatment in PEPFAR-supported Programs, October 2017 - September 2018

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**Background:** The U.S. President's Emergency Plan for AIDS Relief (PEPFAR) supports HIV services in 34 country/regional programs and routinely reports age-disaggregated data. This provides an opportunity to examine global progress toward 2020 UNAIDS 90-90-90 targets in adolescents.

**Methods:** We analyzed PEPFAR program data on adolescents (10-19 years) by age, gender, and region between October 2017-September 2018. We determined number of HIV tests done, positive tests, new on antiretroviral treatment (ART) and calculated: testing yield (# positive tests/# tests), number needed to test (NNT) to find a positive (# tests/# positive tests), and proxy linkage (# newly initiated on ART/# of positive tests). We also determined number on ART, viral load (VL) tests, with VL suppression (VLS) (< 1000 copies/mL) and calculated: VL coverage (VLC) (# VL tests/# on ART 6 months prior) and VLS (# with VL < 1000/# VL tests). Analyses were done in Excel.

**Results:** Thirty-three (97%) programs reported adolescent data. Overall, 14,465,000 were done. More tests were done in older (15-19 years) vs. younger (10-14 years) adolescents (68.9% vs. 31.1%) and in females (57.0% vs. 43.0%). There were 182,332 positive tests. Yield was 1.3% and higher in older adolescents (1.4% vs 0.8%) and females (1.6% vs 0.8%). Average NNT was 79 and higher for younger adolescents (118 vs. 69) and males (127 vs. 62). Eastern Africa (EA) had 0.6% yield and NNT 166, while Southern Africa (SA) had 2.1% yield and NNT 47. ART was initiated in 141,926 adolescents; proxy linkage was 77.8%, and higher in females (84.6% vs. 59.6%) and in EA compared to Western/Central (WCA) and SA (89.2% vs. 75.9% and 74.0%). Of 627,076 adolescents on ART, 59.6% were female and 55.6% were older. VLC was 69.4%, and higher in younger adolescents (77.1% vs. 63.2%), in males (74.3% vs. 66.1%), and in EA than WCA and SA (88.8% vs. 66.5% and 57.6%). VLS was 72.8%, and similar by age and gender. VLS was higher in SA compared to EA and WCA (74.6% v. 73.2% and 61.0%).

**Conclusions:** We found gaps in progress to 90-90-90 targets that can inform adolescent-related programs overall and by age, sex, and region. Targeted and more efficient testing is needed to find younger adolescents and male adolescents. Interventions to improve linkage are needed overall, particularly in male adolescents. Efforts to improve VLS, including optimal ART regimen use, retention monitoring, and routine VL testing, are needed overall, and particularly in WCA.

## TUPEC124

### HIV Prevalence and Size Estimation Findings from an Integrated Bio-behavioral Surveillance Survey of Female Sex Workers and Men who Have Sex with Men in Lesotho, 2018

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**Background:** Surveillance of HIV prevalence and sexual practices is critical to identifying and mitigating risks of HIV transmission among key populations. Lesotho has not had current, reliable data on the burden of HIV among, and size estimates of FSW or MSM. Commissioned by the Global Fund through Pact, the second Integrated Bio-Behavioral Surveillance Survey (IBBSS) captured sexual practices, stigma and discrimination, HIV, TB, and STI prevalence, and size estimates for FSW and MSM.

**Methods:** The study was conducted June-November 2018 in four districts in Lesotho: Butha-Buthe, Leribe, Mafeteng, and Maseru. Crude and adjusted HIV and behavioral risk-factor prevalence were estimated, and weights that adjusted for personal network size and biases in recruitment were generated using RDS-Analyst. Size estimation used five unique methodologies.

**Results:** The study recruited 1,656 FSW and 851 MSM across the four study districts. Adjusted HIV prevalence estimates among FSW ranged from 39.2% to 56.9%. Over 95% of HIV-positive FSW reported being on antiretroviral therapy (ART). Syphilis prevalence among sampled FSW ranged from 2.8% to 9.3%, and Hepatitis B prevalence ranged from 1.7% to 4.2%.

HIV prevalence estimates among MSM ranged from 7.4% to 35.5%. Over 95% of HIV-positive MSM reported being on anti-retroviral therapy (ART). Syphilis prevalence among MSM ranged from 6.8% to 14.4%, and Hepatitis B prevalence ranged from 0.9% to 9.5%.

Across the four districts, the FSW population size was estimated to be 7,587 (3,159-15,318), or 2.51% (1.04%-5.06%) of the adult female population. Across the four districts, the MSM population size was estimated to be 6,081 (2,262-9,131), or 1.96% (0.73%-2.94%) of the adult male population.

**Conclusions:** The 2018 Lesotho found high HIV prevalence among FSW and MSM and established current population size estimates. HIV prevalence was lower among FSW than the 2014 IBBSS found, which may be attributable to differences in sampling but should be further investigated. The percent of HIV-positive FSW and MSM on ART was higher than recent findings for the general population (2016 LePHIA), suggesting efforts linking HIV-positive key populations to care have been effective and should be sustained. Overall, the IBBSS results indicate the need for a targeted approach to HIV case finding, linkage to and retention in care, and a comprehensive HIV prevention strategy for key populations to attain epidemic control in Lesotho.

## TUPEC125

### **HIV Testing among Men who Have Sex with Men in Developing Countries: Barriers, Facilitators and Recommendations**

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**Introduction:** The uptake of HIV testing has a potentially important role to play in reducing HIV among gay and other men who have sex with men (MSM). It is therefore important to increase their access to HIV testing services as achieving the 90-90-90 target is pertinent. The purpose of this review was to identify the barriers and facilitators to HIV testing among MSM and to provide recommendations.

**Methods:** We searched the following databases from 2000 through December 2018: PubMed; AEGIS (AIDSLine and International AIDS Society abstract archives); CINAHL; Web of Science; PsycINFO and Scopus. In addition to this, scanning the citation lists of included studies was done. Searches were limited to studies published in English only. Studies included were those that addressed HIV testing among MSM in developing countries and were published from 2000. Synthesis of the qualitative data extracted from the primary studies was carried out to highlight the barriers and facilitators to HIV testing among MSM.

**Results:** A total of 1119 unique references were located by our searches. After screening, a total of 12 study reports were retained in the review. One of these were linked reports presenting data from the same study. Hence, a total of 11 qualitative studies were included. Seven major barriers were identified. Fear of the consequences of a positive HIV test, criminalization of MSM act in most of the developing countries and stigma related to testing were three common barriers observed. The main facilitator to enhanced uptake of HIV testing is sense of responsibility towards oneself or one's partner. Religion, number of HIV testing centers and age of the MSM were not prominent factors influencing uptake of the test.

**Conclusions:** HIV testing services are still not fully utilized by MSM in developing countries. It is therefore imperative that alternative strategies such as social media awareness strategies, community-based testing, HIV self-testing, and modifications to the traditional clinic-based model are adopted. In addition, decriminalization of MSM act in developing countries can lead to an increase in uptake of HIV testing services.

## TUPEC126

### **Evaluation du Traitement Antirétroviral chez les Détenus PVVIH de la Maison d'Arrêt de Niamey**

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**Introduction:** Au Niger, l'épidémie du VIH/SIDA est de type concentré avec une séroprévalence basse dans la population générale (0,4%), mais élevée parmi les populations clefs, dont ceux vivant en milieu carcéral (1,9%). A ce jour, peu de données sont disponibles en Afrique sur l'infection à VIH chez les personnes privées de liberté en général, sur la réponse au traitement antirétroviral en particulier. C'est dans ce contexte que s'inscrit cette étude qui se fixait pour objectif d'évaluer la réponse immuno-virologique à 12 mois de traitement antirétroviral.

**Méthodologie:** Il s'agit d'une étude transversale réalisée au niveau de la maison d'arrêt de Niamey construite en 1947. Ont été inclus tous les patients infectés par le VIH sous traitement depuis au moins 12 mois.

**Résultats:** Avec une capacité d'accueil de 455 places, cette maison d'arrêt hébergeait 1357 détenus au moment de l'étude, soit un taux d'occupation de 298%. Au total, 37 patients tous infectés par le VIH-1 ont été mis sous traitement, dont 5 femmes et 32 hommes. La tranche d'âge la plus représentée est celle de 30 à 40 ans (26 patients soit 70,27%). Il y'avait une coinfection par le virus de l'hépatite B dans trois cas (8,11%). Tous les patients étaient sous traitement de première ligne dont 30 (81,1%) sont sous TDF+3TC+EFV et 7 (18,9%) sous AZT+3TC+NVP. Au plan de la réponse au traitement à M12, nous avons noté une bonne restauration immunitaire avec un gain moyen de 298 cellules/m<sup>3</sup>, tandis que la charge virale était indétectable chez 29 patients (78,38%).

**Conclusions et Recommandations:** Cette étude nous montre la faisabilité et l'efficacité d'une prise en charge par les antirétroviraux en milieu carcéral, mais aussi l'extrême faiblesse du dépistage qui est la principale porte d'entrée aux soins. La prise en charge des populations clefs en général, des détenus en particulier est indispensable pour l'atteinte des trois 90.

**Mots Clés:** Traitement antirétroviral, détenus, Niamey

## TUPEC127

### **Towards 90-90-90 Diagnostic Target: HIV Testing, Sexual Behavior and Knowledge of Pre-exposure Prophylaxis among Adolescent Female Sex Workers of Osogbo, Osun State**

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**Background:** Stigma and discrimination in health care facilities deter many members of key populations from learning their HIV status. This study aims to access HIV testing, sexual behavior and knowledge of pre-exposure prophylaxis (PrEP) among adolescent female sex workers (FSW) in Osogbo, Osun state, Nigeria.

**Methods:** We conducted nine focus group discussions (FGDs). 80 Adolescent FSW were randomly selected from 5 bars, 2 brothels, 2 street corners in Osogbo, Osun State Nigeria. They provided information on their knowledge about prevention and treatment of HIV, sexual behaviors, condom use and PrEP. Translated and transcribed FGDs were thematically coded and analyzed using NVivo. HIV testing of respondents was also carried out.

**Results:** Respondents were between ages 16-19. Half of the respondents had undergone HIV testing before. 56.3% of study participants indicated having knowledge of PrEP, although, they did not see the procedure as necessary. Minority (10%) mistook PrEP for contraceptive pills, believing it should be used in pregnancy prevention. All the respondents were concerned about what the likely side effects upon administration of PrEP might be. One fifth of the study population was HIV positive and lacked knowledge of their HIV positive status, prior to undergoing test with us. Furthermore, they believed that testing positive to HIV meant an end to their profession. FSW felt daily PrEP would be logistically challenging. Most FSW indicated that a preference of receiving PrEP from government health facilities or HIV testing clinics. The inclusion of cervical cancer screening along with HIV/STI prevention counseling was suggested by 2.5% of respondents.

**Conclusions and Recommendations:** There is need to reach younger FSWs and those newly entering sex work, with HIV prevention, education, testing and pre exposure prophylaxis (PrEP).

**Keywords:** HIV Testing, Female sex workers, Adolescents, PrEP



## TUPEC128

### Patterns of Condom Use among Brothel and Non Brothel Based Female Sex Workers and their Partners in Nigeria

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**Background:** Brothel Based Female Sex Workers (BBFSWs) and Non - Brothel Based Female Sex Workers (NBBFSWs) contribute to 19.4% and 8.6% of HIV burden among key populations in Nigeria (IBBSS 2014). Condom programming has been one of the most effective interventions for HIV prevention among Female Sex Workers (FSWs). This study aimed to assess the pattern of condom use among FSWs with their partners.

**Methods:** A cross-sectional study was conducted among 4590 female sex workers (FSWs) across 15 states in Nigeria. A time location sampling technique was used for selection of non-brothel based female sex workers (NBBFSWs) while cluster sampling method was used for brothel-based female sex workers (BBFSWs). A master list of validated hotspots of FSWs were assessed and selected using a random sampling method. A structured questionnaire was used to elicit information. Data was analysed using SPSS version 24.0 software.

**Results:** The mean age of FSWs was 28±6.0 while the minimum and maximum age was 15 years and 56 years respectively. Condom use with regular client at last sex was very high (96%). Almost (96%) all the FSWs used condom in the last one month while Condom use at first sex with a partner or client was very low (27%). Condom use at last sex with casual partner was high (81%) compared to spouse or lived in partner (47%) and boyfriend (52%) respectively. Condom use with casual partners and spouses in the last sex was significantly associated with BBFSWs ( $p < 0.05$ ) while condom use with boyfriends was associated with NBBFSWs ( $p < 0.05$ ). NBBFSWs are two times more likely to use condom with their boyfriends compared to BBFSWs (OR= 2.0, CI= 1.0; 1.6). Main reasons for not using condom with boyfriends were: Trust my boyfriend (44 %), didn't think it was necessary (14%), wanted to enjoy the sex (14%), Partner objected (7%) and condom not available (6%).

**Conclusions and Recommendations:** Condom use with regular partners of FSWs was very high. However, condom promotion programme should target new entrant FSWs as well as boyfriends and live-in partners or spouses of FSWs. Further researches should investigate factors contributing to very low condom use at first sex with a partner among FSWs.

**Keywords:** HIV Condom BBFSWs Partners NBBFSWs

## TUPEC129

### **The Effectiveness of Community Score Card Approach in Improving HIV/Aids Service Delivery for Key Population in Uganda: Experiences of Three Districts**

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**Background:**Community scorecard approach is a social accountability tool that employs participatory methods to empower service users in influencing quality, efficiency, effectiveness and accountability in health service provision at health facility level for key population including; sex workers, men having sex with men, truckers and injectable drug users.

**Objective:** To review and improve HIV/AIDS service delivery for key population in six health facilities of central Uganda.

**Methods:** Between 2017-2018, we adopted the use of community Scorecard to regularly review and improve HIV/AIDS services in six selected public health facilities in three districts of central Uganda. We used focus group discussions, participant observation and interface meetings to score quality of health services at model health facilities. We conducted eight quarterly scorecard sessions involving service users and providers to holistically assess service delivery gaps and generate concrete actions to address them

**Results:** ART availability and accessibility improved from 20% in 2017 to 80% in 2018 evidenced by acceptable stock levels of ART. We noticed progressive elimination of physical stigma at health facilities. The number of key population freely interacting with health care providers increased from 45 in 2017 to 500 by 2018. Facility records showed increased numbers of key population accessing family planning commodities; Specially, condom up take increased from 45% to 98%. To effectively increase access to condoms at hotspots, over 200 condom dispensers were distributed in targeted hotspots.

**Conclusions and Recommendations:**Community Scorecard revealed important gaps in the health care systems that makes it difficult for key population to access minimum health care services. There is need to build responsive health care system for effective health service delivery to effectively contribute to sustainable development.

## TUPEC131

### Évaluation de l'Incidence du VIH dans le Cadre d'une Approche Classique de Prévention chez les HSH, à Travers une Étude Bio-comportementale Longitudinale à Douala, Cameroun

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**Introduction:** La prévalence chez les HSH à Douala était de 24,7% selon l'étude bio-comportementale IBBS de 2011. L'étude, répliquée en 2016, situe désormais cette prévalence à 25,5%. En plus de la mesure de la prévalence, l'étude prévoyait une phase longitudinale pour mieux analyser la dynamique de l'épidémie chez les HSH, et évaluer l'efficacité de la prévention. Alternatives-Cameroun a abrité la phase de l'étude ayant eu lieu à Douala.

**Méthodes:** Un point focal a été recruté pour coopter et suivre les participants tout au long de l'étude. Les candidats, tous HSH vivant à Douala, intégraient la cohorte de l'étude à la suite d'un test VIH négatif, et passaient par les étapes suivantes selon les différents rendez-vous :

1<sup>er</sup> contact : Test VIH, test de syphilis et questionnaire d'évaluation des risques. 2<sup>e</sup> rendez-vous, au 3<sup>e</sup> mois : Test VIH de confirmation, et questionnaire d'évaluation des risques.

3<sup>e</sup> rendez-vous, au 6<sup>e</sup> mois : Test VIH, Test de syphilis, et questionnaire.

4<sup>e</sup> rendez-vous (9<sup>e</sup> mois) et suivants, tous les 3 mois : Test VIH et questionnaire.

A chaque rendez-vous, chaque participant, contacté la veille déjà, recevait des messages de prévention sur les IST/VIH, environ 2\$ de frais de transport, des préservatifs et gels lubrifiants. Les participants non joignable au cours de l'étude étaient activement recherchés et éventuellement servis à domicile.

**Résultats:** Nous avons eu 295 participants à l'étude avec un taux de rétention de 65%. Au cours de l'étude, 35 participants sont devenus séropositifs au VIH, soit un taux d'incidence de 12% sur une période de 15 mois, et 2 participants ont été contrôlés positifs à la syphilis.

**Conclusions et Implications:** La forte incidence du VIH dans cette étude, malgré tout l'arsenal de prévention et de suivi déployé, confirme la limite des méthodes classiques de prévention parmi les HSH, et la nécessité de les compléter par des approches biomédicales, notamment la Prep. Ces résultats ayant alerté les promoteurs de l'étude, celle-ci a dû être interrompue dès le quinzième mois, par rapport aux 24 mois prévus. Le gouvernement camerounais jusque-là réticent à la Prep a validé ce service pour les populations clés au vu de ces résultats, similaires à ceux d'autres villes. Les personnes devenues séropositives au cours de l'étude ont rejoint la cohorte des PVVIH, et les participants restés négatifs ont été enrôlés dans une nouvelle cohorte pour la Prep, en plus d'autres bénéficiaires contrôlés négatifs au VIH.

## TUPEC132

### Social Profile and Vulnerability to HIV among Female Sex Workers in Burundi

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**Background:** Sex Work is a phenomenon found in all societies. Among the most vulnerable populations to HIV, sex workers occupy an important place. However, there is limited understanding of their social and behavioral characteristics for programming purposes. We undertook a study among female sex workers drawn from Gitega, Ngozi, Kayanza, Muyinga and Bujumbura Mairie Nord provinces of Burundi to address this knowledge gap

**Methods:** In 2018, we organized workshops with female sex workers to strengthen their knowledge on HIV transmission and prevention mechanisms. we issued anonymous questionnaires to assess socio-demographic characteristics and HIV risk behaviors. The key domains assessed were: age, education level, number of children, condom use, HIV testing, use of modern contraception and experience of rape. A total of 508 female sex workers completed the questionnaires. The data were processed and analyzed with Microsoft Excel. The last two variables were not analyzed for Bujumbura Mairie Nord due to data incompleteness

**Results:** Respondents' age ranged from 17 to 57 years, with an average of 28.5 years. Nearly half (41.42%) of the respondents were below 25 years, Educational attainment was low, with over a third (38.19%) of the respondents never having attended any formal education, while 37.60% had completed only primary level education. The respondents' number of own children ranged from 0 to 8, with an average of 2.2 children. About a quarter of the respondents (24.21%) had one child and a similar proportion had two children. Condom use was low, 45.3% of respondents used condoms occasionally while 6.1% never used condoms. Over three-quarter (75.59%) reported to have tested for HIV and knew their test results while the rest had never taken an HIV test. A vast majority (80.88%) reported use of modern contraception while one in four (24.75%) reported experience of rape

**Conclusions and Recommendations:** The average age was 28.5 years, highlighting the need to adapt HIV prevention programs to the specific needs of young people. The majority of the respondents had no formal education or had attained only primary level education. As such, keeping girls in school for as long as possible will certainly contribute to reducing their vulnerability to HIV. Given this was not a representative survey, a nation-wide study of behavioral and operational characteristics of female sex workers and other key populations is required to guide Key Population programming in Burundi

## **TUPEC133**

### **Advocacy Key to Improving HIV Interventions among People who Inject Drugs (PWID) in Nigeria**

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**Issues:** The National Agency for the Control of AIDS (NACA) Coordinates the National HIV response. To ensure effective coordination, NACA builds the capacities of staff and stakeholders, as well as different platforms to provide HIV/AIDS services. NACA works to address the Issues of human rights abuses and access to HIV services for PWID in Nigeria.

**Descriptions:** Advocacy is a process of influencing change in policies or practices with negative impact on people who are vulnerable. As part of the efforts of NACA to ensure improved interventions for PWID in Nigeria, NACA set in place strategies targeting stakeholders that are involved in PWID Programming. Some of these strategies include the development of an advocacy toolkit for HIV Prevention Programming for PWID in Nigeria. This toolkit provided steps in conducting advocacies&achieving results. In March 2019 , 33 participants including CSOs, networks and Partners were trained on how to use the toolkit in conducting advocacies. During the training, each organization represented developed their advocacy plans. These plans were followed up&results were achieved. Others include resource mobilization targeting partners that can support PWID interventions. Through advocacy to National Drug Law Enforcement Agency (NDLEA), their staff were trained to conduct HIV Testing services at NDLEA formations&ensure more people have access to HIV services. Positive clients were referred for treatment. Also, through advocacy to UNODC, NACA has been able to train Law enforcement Agencies (LEAs) on partnerships between LEAs & CSOs for Improved HIV services for PWID&also stop criminalization that affect PWIDs access to HIV services. Advocacy to stakeholders Including Ministries, Departments&Agencies to gain their support for HIV programming for PWID especially regarding the provision of full component of harm reduction(HR). Recently, Nigeria started the process of piloting HR interventions using three pilot centers.

**Lessons learned:** The PWID community in Nigeria is huge and advocacies and other forms of engagements at different levels have been very effective in reaching them with programming. Capacity building of community members is very important so that they can reach their peers,demand for HIV services&improve adherence to treatment.

**Next steps:** Efforts should be made to increase PWID access to HIV Testing Services (HTS) , drug treatment services,harm reduction interventions& increased number of One Stop Shops.

## TUPEC135

### Populations Clés en Mauritanie: Résultats de la Première Enquête Intégrée de Surveillance Biocomportementale (IBBS) en 2019

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**Contexte:** En Mauritanie, la prévalence du VIH au sein de la population générale adulte est de 0.5% relativement faible, et l'épidémie est de type concentré. On note une absence de données sur certains groupes à haut risque comme les Professionnels de sexe (PS) et les hommes qui ont des rapports sexuels avec d'autres (HSH).

Le principal objectif de cette étude était de fournir des informations sur la prévalence du VIH et les facteurs de risque associés chez les HSH et PS afin d'éclairer les réponses programmatiques et politiques et de fournir une base de référence à partir de laquelle suivre les tendances épidémiques.

**Méthodologie:** La méthode adoptée pour l'échantillonnage était l'échantillonnage piloté par le répondant RDS ( Respondent Driven Sampling ) pour recruter les HSH et PS dans les 3 villes choisies (Nouakchott, Nouadhibou et Rosso) du 01 Mars au 15 avril 2019. Les HSH et PS, âgés d'au moins 18 ans ont été recrutés après la vérification de l'éligibilité et le recueil du consentement. Un questionnaire comportemental a été administré à chaque participant, suivi d'un prélèvement sanguin pour le dépistage du VIH, selon l'algorithme national.

**Résultats:** Au total 705 HSH et 606 PS ont été recrutés. La majorité des HSH (77%) avait moins de 25 ans contrairement aux PS où 62% avaient un âge supérieur à 25 ans. L'âge moyen des HSH était de 24,6 ans (18 à 64 ans) à Rosso, de 22,3 ans (18 à 56 ans) à Nouakchott et de 26 ans (18 à 61 ans) à Nouadhibou.

La majorité des HSH (95,5%) ont déclaré être célibataires. A l'exception de Rosso (67%), moins de 10% des PS sont mariées. L'âge moyen des premiers rapports sexuels vaginaux ou anaux chez PS était de 17ans.

La prévalence du VIH dans l'étude échantillon était de 3,7% à Rosso, 25% à Nouakchott et 5% à Nouadhibou, avec des disparités selon l'âge, l'affiliation à une association, le statut matrimonial.

**Conclusion et Recommandations:** Cette première étude IBBS auprès des populations clés en Mauritanie, montre un portage du VIH beaucoup plus élevé chez les HSH (23.4%) que celui observé chez les hommes de 15 à 49 ans (0,5%) en population générale et chez les PS (9%).

L'accent doit être mis sur la prévention par une meilleure connaissance du VIH/SIDA, la promotion de l'usage du préservatif, une amélioration de la prise de conscience du risque, le dépistage volontaire et une sensibilisation à l'endroit des jeunes filles.

**Mots-clés :** HSH, PS, IBBS, Mauritanie

## TUPEC136

### **HIV/AIDS Situation Analysis and Sexual Practices among Prison Inmates in Nigeria: A Call for Scale up of Prevention and Treatment Interventions**

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**Background:** Globally, penal institutions are considered environment for fast and uncontrolled spreading of HIV and other sexually transmitted diseases due to high risk exposure to unsafe sexual practices and poor health care services. However, the exact number of HIV-positive prisoners is difficult to estimate. The study aimed to assess the prevalence of HIV and sexual orientation of prison inmates in Nigeria.

**Methods:** A cross sectional descriptive study with quantitative and qualitative data collection methods was employed for the assessment. A systematic random sampling technique was used to select 2,511 prison inmates from twelve prisons across the six geopolitical zones. Questionnaire and blood sample collection were used to extract information on the behavioural and biological component of the study respectively. Ethical approval was obtained from the National Health Research Ethics Committee. Quantitative data were analysed using SPSS version 21 while the qualitative data were transcribed and also analysed.

**Results:** Majority of the respondents were males (92%) and 50% were aged 25-35 years. More than half (66.7%) of the respondents were single while 40% had secondary education. Overall HIV prevalence among prison inmates was 2.8%. HIV prevalence was significantly higher among female (6.9%) than Male (2.7%) inmates. Prevalence was highest among those older than 45 years (8.1%) and least among those below 25 years (1%) for both males and females. Higher prevalence (3.8%) was also reported for those with no formal education. Majority (70%) of the respondents reported that consensual sex occurred in the prison and this was higher among males (76%) than females (28%). Also, 60% of the respondents indicated that sex was being offered for goods and services and this was higher among males (64%) than females (12%).

**Conclusions and recommendations:** HIV prevalence was significantly higher among prison inmates and twice more than the general population. It is therefore, imperative to classify prison inmates as key population while programming to scale up HIV prevention and treatment services in the Nigeria prisons.

**Keyword:** Prison, Inmates, HIV, Nigeria, Prevalence

## TUPEC137

### Progress Towards 90-90-90 Targets in Female Sex Workers, Eritrea

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**Background:** The HIV epidemic in Eritrea has transitioned from a generalized to a concentrated one with HIV prevalence consistently below 1% in pregnant women and 14.5% in female sex workers (FSWs). Thus, the progress towards achieving the 90-90-90 UNAIDS targets was determined in these key populations of high risk to monitor the status.

**Methods:** The study design was a cross-sectional that recruited FSWs using Respondent Driven Sampling (RDS) and conducted from 15-28 December, 2017. A total of 772 female sex workers, residing in 11 towns of the country, aged above 18 years were recruited. Eligible FSWs were interviewed using structured questionnaire followed by blood drawing. Blood was screened for HIV antibodies with ELISA (Acudiagnos) and the positive were confirmed using Murex HIV EIA at the National Reference Laboratory. Viral load testing was done by Cobas amplipre (Rosch) using serum and a cut-off of 200 or less copies/ml was used to determine viral suppression.

**Results:** Age ranged from a minimum of 18 years to a maximum of 60 years with median age of 30 years. The overall prevalence of HIV in these FSWs was estimated at 14.5% [C.I: 12.3%, 17.1%]. Among the 110 HIV-infected FSWs, 70 (63.6%), [95%CI: 54.7%-72.2%] already knew their positive status. Forty participants were newly tested HIV-positive as they self-reported that they were HIV-negative during their last test. All of the respondents who knew their HIV status reported that they were receiving ART at the time of the study. Among the 70 FSWs who received ARV with a viral load measurement 56 (80.0%), [95%CI: 68.7%- 87.7%] had viral load of 200 or less copies/ml.

**Conclusions and Recommendations:** In key populations with high HIV prevalence, the current findings of 64-100-80 targets indicate that proportion of FSWs who knew their status was low. Despite this, all those who knew their status were enrolled into care and on treatment while the majority were virally suppressed. In order to reach the first target of know your status by 2020 and contribute to interruption of transmission, more sex workers need to know their status and sustain the high treatment enrolment and viral suppression. Therefore, innovative testing strategies are recommended to improve HIV testing in female sex workers in Eritrea.



## TUPEC138

### Estimating the Population Size of Female Sex Workers Using Three-source Capture-recapture Methods — Rwanda, 2018

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**Background:** Female sex workers (FSW) continue to drive HIV dynamics in Rwanda. Establishing accurate population size estimates (PSE) is important for prioritizing target populations and planning HIV prevention provision of various services. Three-source capture-recapture (3S-CRC) can increase PSE accuracy compared to two sources and relaxes the strict independence assumption. We employed the 3S-CRC method to estimate the number of FSW nationally.

**Methods:** In August 2018, 3S-CRC was used to estimate the population size of adult FSW (15 years and older) in Rwanda. Using data from a 2017 hotspot mapping exercise, a portion of street- and venue-based FSW were sampled at the administrative sector level of each province and "tagged" with unique gifts: key holders (capture 1) and bracelets (capture 2). No gifts were offered during the final round (capture 3). Five different colored gifts were used to monitor FSW migration across the five provinces. \*\* Each capture was completed within one week to minimize the influence of migration in and out of Rwanda, recall bias, and other biases that might associated with time. Open Data Kit (ODK) was used for data collection. Encounter data were aggregated for analysis. Population size estimates and 95% credible sets were calculated using Bayesian nonparametric latent-class capture-recapture (R package: LCMCR).

**Results:** The three captures (1, 2, and 3) "tagged" 1,042, 1,204, and 1,488 FSW, respectively. There were 111 FSW recaptured between captures 1 and 2, 237 FSW recaptured between captures 2 and 3, and 203 FSW recaptured between captures 1 and 3. There were 46 FSW "tagged" in all three captures. The estimated population size for street-and venue-based FSW in Rwanda lies within the 95% credible set: 8,853 -23,495, with corresponding median of 13,714 FSW.

**Conclusions:** The 3S-CRC method proved to be a low-cost and relatively easy to use technique for estimating the size of this hard-to-reach population. This estimate provides the basis for determining the denominators to assess HIV program performance towards epidemic control.

## TUPEC139

### **HIV Infection in People who Used Drugs in Mozambique: Preliminary Results for Blood-borne Infections Screening in a Drop in Center in Maputo**

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**Background:** HIV infection is a public health concern in Mozambique, with HIV prevalence of 12,3% in general population (WHO 2016). However, the Integrated Biological and Behavioral Survey performed in 2014 showed HIV prevalence among people who inject drugs (PWID) of 50.1% in Maputo city, reinforcing the need to implement harm reduction programs, HIV prevention and treatment activities specifically for PWID in order to reduce the risk of infection among this population. In 2018, Médecins Sans Frontières (MSF) in collaboration with local partners and authorities opened the first drop-in center (DIC) for people who use drugs (PWUD) in a neighborhood with high concentration of PWUD in Maputo city. Beneficiaries receive point-of-care screening for HIV, HCV, HBV and referral for continuity of care. Needles and syringes program (NSP) started late 2018. We describe the results of DIC based testing intervention for PWUD in Maputo.

**Methods:** Retrospective analysis of routine data collected in registers and electronic database (Research Electronic Data Capture-REDCap®) for HIV, HCV and HBV testing from May 2018 to June 2019

**Results:** During the reviewed period, 959 PWUD were tested at first DIC visit with rapid diagnostic tests for HIV (Alere Determine® HIV-1/2, Uni-Gold®HIV-1/2 ) HCV (SD Bioline® HCV), and HBV (SD Bioline® HBsAg). 906 (94.4%) were male, with median age of 27 years (IQR 21,33). 93.3% of beneficiaries reported heroin use; 14.1% reported injecting at least once. Among all PWUD tested, 181 (18.9%) were positive for HIV, and 7.3% and 5.8% for HCV and HBV, respectively. Among injectors, 42.3% were positive for HIV, and 27.9% and 8.0% for HCV and HBV respectively. In 2019, among 80 HIV newly-diagnosed cases, 30 (38%) were successfully referred for HIV treatment and 24 (80%) were initiated on ART.

**Conclusions and Recommendations:** Blood-borne infectious diseases are a major concern for PWID in Maputo, with very high HIV and HCV prevalence and limited access to health services. The opening of a DIC, with implementation of NSP in one of the key consumption areas, has improved PWUDs access for testing by increasing proximity of services and overcoming barriers such as stigma and discrimination. However, linkage to care remains challenging. Future plans include expansion of existing services and outreach activities in order to reach more PWID, strengthening of referral system, and implementation of opioid substitution treatment with MoH support.

## TUPEC140

### **Fishermen in Eritrea as Low Risk Groups for HIV and Syphilis Infections, 2018**

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**Background:** The HIV epidemic in Eritrea has transitioned from a generalized to a concentrated one with HIV prevalence consistently below 1% in pregnant women and above the national average in some key population groups such as female sex workers and long distance truck drivers. This has made it necessary to identify other potential high risk groups in order to curb further the HIV epidemic. Thus, HIV prevalence study was conducted in fishermen to determine their risk level

**Methods:** A cross-sectional study was conducted among all the fishermen who resides in 8 sub-regions and 8 coastal villages of the two coastal regions of Eritrea from 15-28 December, 2018. A total of 1930 fishermen were recruited and eligible respondents were interviewed using structured questionnaire followed by blood drawing. They were screened for HIV antibodies using AccuDiag™ HIV 1& 2 Ag Ab ELISA (USA) and positives confirmed using MUREX HIV -Ag /Ab combination (UK) at the National Reference Laboratory. Syphilis was tested using RPR latex product by Mediff (France).

**Results:** All the fishermen were males and equally distributed among the two coastal regions of the country. Age ranged from 15 up to 80 with median of 34.1 years. The overall prevalence of HIV in these fishermen was estimated at 0.62% similar to the prevalence of HIV in the general population. None of these fishermen tested positive for syphilis infections. Though, general awareness on AIDS was universal only 31.2% of fishermen had comprehensive knowledge on HIV/AIDS and 54.8% had been ever tested for HIV in their life time. Among those who reported to have sexual intercourse in the last 12 months, 13% had sexual intercourse with a non-regular partner and only 81.5% used condom in this last sexual activity. Access to condom was universal with 96.3% of the subjects able to get condom when needed. Low number of HIV positive fishermen made it difficult to conduct logistic regression.

**Conclusions and Recommendations:** In many African countries fishermen are key populations of higher risk for HIV infection. As far as Eritrea is concerned, the low prevalence similar to that of pregnant women excludes this fishermen from the other high risk groups. Therefore, to sustain this low prevalence and risk behaviour and regularly monitor their HIV status, a continuous health education program on HIV prevention is recommended.

## TUPEC141

### Challenges in Uptake of Public, Private and Peer-led HIV among MSM in Nigeria

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**Background:** The prevalence among men who have sex with men (MSM) is the highest among key populations (KP) in Nigeria and continues to rise from 13.5% in 2007 to 17.2% in 2010 and 22.9% in 2014. HIV prevalence among MSM is over 23 times that of men in the general population (0.9%). Due to the importance of MSM in Nigeria's HIV epidemic, we identified factors that may serve as significant barriers to HIV services by MSM in public, private and peer-led health services among MSM in Nigeria

**Methods:** The study recruited 299 MSM using the snowball approach in two Nigerian states of Rivers and Kaduna respectively. Data was collected through KII using structured questionnaire to identify challenges in the uptake of HIV services in public, private and peer -led health services/ facilities among MSM in Nigeria. Pearson Chi-square to test significance

**Results:** Mean age was 30.2±4.5years. Factors that may serve as significant barriers for access of HIV services by MSM in public and private clinics when compared with peer led health services were assessed. These factors include distance of service delivery points to home (p=0.003), lack of knowledge about HIV by provider (p< 0.001), lack of friendly facilities (p< 0.001), inadequate information about MSM (p< 0.001), stigma by providers in public 81.8% , private 58.9% peer-led 52.9% (p=0.001), inability to address police harassment (p=0.01) and inability to provide comprehensive services in one place in public 58.2%, private 71.7% and peer-led 58.9% ((p< 0.001).

**Conclusions and Recommendations:** To reduce new infection among MSM in Nigeria, more targeted interventions which include provision of adequate HIV information specific to MSM, encouragement of peer-led HIV intervention, provision of an integrated health services in a one stop shop for MSM, more targeted HIV prevention services for MSM and continuous training of health care providers to provide friendly health services for MSM is required.

## TUPEC142

### Targeting Mobile Populations Increases Positivity Yield for Accelerated Achievement of 1<sup>st</sup> 95 among Most at Risk Populations in Zambia

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**Issues:** Despite economic improvements of recent years, the trickle-down effect has not been effective in dealing with the burdens of poverty and HIV in Zambia. The HIV prevalence rate is 11.2% in a population estimated at over 16 million. The high unemployment rates of 61.4% in urban and 38.6% rural has fuelled high mobility and migration for employment such as long-distance truck driving, fish selling, mining and cross-border trading. This has predisposed people to high-risk sex including contracting of HIV. The mobile workers face challenges in seeking high-impact HIV services. The need to take high-impact services to this population is critical as this is a priority population sub-group in Zambia.

**Descriptions:** To contribute to reducing HIV in Zambia, USAID Zambia Community HIV Prevention Project is providing HIV prevention interventions to most at-risk priority populations including mobile workers. To improve HIV case identification and achieve the first 95 of the UNAIDS 95-95-95 goal, the project administers a risk assessment tool to individuals. Depending on risk, HIV services of prevention education, testing, referrals to services such as treatment, are offered. Counselling and testing is offered to those with higher risk of contracting HIV. The project provided HIV Testing services to 78,117 priority populations individuals from June to December 2018 with 6,831 testing positive representing 8.7% positivity yield while 14,227 were tested from January to June 2019 with 25% positivity yield after a shift to reach more of the mobile populations. The positivity yield has been higher in the mobile priority population compared to other sub-groups. The highest yield came from mobile populations with 16% which was two times higher than the yield in AGYW, despite the AGYW taking 49.9% of HTS reach with 8% positivity yield.

**Lessons learned:** Data showed focused and targeted testing of mobile populations with use of the risk assessment tool leads to increased positivity yield. To contribute to and accelerate progress towards the first 95, the project needs to increase resources towards reaching mobile population while also serving other priority population sub-group to increase case finding.

**Next steps:** Considering the lessons learned, there is need to increase the level of effort and budgets towards tracking mobile populations where positivity yield is higher than in other priority population sub-groups the project is targeting.

**Keywords:** UNAIDS 95-95-95/PositivityYield/Zambia

## TUPEC143

### Transgender Women Had Higher HIV Prevalence than Other Men who Have Sex with Men in Côte d'Ivoire

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**Background:** Estimated HIV prevalence among men who have sex with men (MSM) was 19.6% in Abidjan, Côte d'Ivoire in 2012, four times that of men in the general population in that city (4.1%, 2012). However, there is no data on HIV prevalence and risk factors among transgender women (TGW) in the country. Studies characterizing the epidemic among TGW are crucial for prevention and control efforts. In 2016, Heartland Alliance International (HAI), in partnership with the US Centers for Disease Control and Prevention, conducted an STI/HIV integrated bio-behavioral survey (IBBS) among MSM and TGW in seven districts in Côte d'Ivoire.

**Methods:** The IBBS surveyed demographic characteristics, behavior, and HIV and STI prevalence among MSM and TGW using time-location sampling. Using STATA version 15.1, we constructed frequency tables and used Pearson's chi-square ( $\chi^2$ ) to test if the differences of the proportions of HIV positivity broken out by these factors were statistically significant. We used bivariate logistic regression to produce crude odds ratios (OR) showing the predictive power of each independent variable on HIV prevalence. Finally, used multivariate logistic regression to identify key factors associated with HIV-positive serostatus adjusting for potential confounding.

**Results:** In total, 1,484 MSM/TGW were approached for this survey. Of these, 97% [95% CI: 96.9-98.4 n=1,451] consented to the interview and 85% [CI: 83.5-87.1 n=1,267] gave consent and were tested for HIV. MSM accounted for 82.5% of the sample [CI: 80.5-84.4, n=1,175] while trans women were 17.5% [CI: 15.6-19.5, n=249]. Some respondents did not answer this question (n=60). Of TGW, 25.5% (55/216) were HIV-positive compared with 15.9% (184/996) among non-trans MSM ( $\chi^2$  5.4770 P.=0.019). TGW were one and one half times more likely to be HIV-positive than MSM: OR 1.51 (CI: 1.07-2.13). After testing various variables in multi-variate regressions, being TGW was still associated with significantly higher HIV prevalence (AOR 1.57 (CI: 1.09-2.27, P. = 0.017) along with older age (22-25 and  $\geq$  26 years vs.  $\leq$  21), region (Abidjan and Western Cote d'Ivoire had higher prevalence than Eastern Cote d'Ivoire) and participation in HAI programming ( $\chi^2$  62.04 P.  $\leq$  0.001  $R^2$  = 0.0524).

**Conclusions:** TGW represent a significant proportion of key populations in Cote d'Ivoire and are highly impacted by HIV/AIDS. HIV programs will need to design and scale up targeted HIV interventions for TG.

## TUPEC144

### **From Policy to Action: Improving HIV Treatment Initiation among Key Populations (KPs) in Ghana**

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**Issues:** Ghana has adopted the global 90-90-90 targets to sustain progress towards controlling the AIDS epidemic by 2020. One of the key factors in achieving this target is to ensure no HIV positive person is left behind for treatment, which is in line with the WHO "Treat All" policy. The updated guidelines in HIV care state, "Everyone who is HIV positive should be put on treatment (ART) in the shortest possible time after adherence counselling." However, KPs often face stigma and discrimination that impede their initiation of treatment.

**Descriptions:** The USAID Strengthening the Care Continuum Project works with 13 local civil society organizations (CSOs) to identify HIV positive KPs, including female sex workers (FSWs) and men who have sex with men (MSM), ensuring that they initiate ART in line with the 'Treat All' policy adopted by Ghana in 2017. To ensure full implementation of the policy, monitoring visits to project sites run by CSOs and government, revealed that it took between one and two weeks to put people on treatment. The project developed a brief on the policy and disseminated it to regional stakeholders in the health sector, in an effort to decrease treatment initiation time. The project analyzed service delivery data for 824 KPs accessing services from health facilities to examine changes in the time it takes to initiate an individual on ART. We compared the pre-dissemination policy period between January to September 2017 and the post-dissemination period of October 2017 to June 2018.

**Lessons learned:** During the nine-month pre-policy dissemination period the time for ART initiation for FSWs was 45 days compared to less than three days in the nine-month post-policy dissemination period. The average time to ART initiation for MSM dropped from about 80 days in the pre-policy dissemination period to between two and 17 days in the post-policy dissemination period, while the duration for FSWs dropped from between three and 30 days. About 75% of KPs who tested positive for HIV were initiated on ART within one to seven days, with more than half initiating on the same day they tested positive in the period between April to June 2018 (post policy period). The sensitization meetings were critical for ensuring implementation of the policy.

**Next steps:** Ghana Health Service should promote understanding of the Treat All Policy and coordinate its implementation at all ART sites.

## TUPEC145

### **Sociodemographic and Behavioural Characteristics of Regular Clients Associated with the Systematic Use of Condoms with Sex Workers in Ouagadougou (Burkina Faso)**

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**Objective:** To identify the socio-demographic and behavioural characteristics associated with consistent condom use among regular clients of Female Sex Workers (FSW)

**Methods:** A cross-sectional study was conducted between September 2009 and September 2011 in Ouagadougou (Burkina Faso). Data about regular clients was collected indirectly among FSW. Regular clients are men who have sex with FSW repeatedly after the first occasional sex act. This long-term relationship has been loveless according to FSWs. We first used a fixed-effect logistic regression model and another random effect model. We compared the two final models and selected the best model (the lowest criterion of Akaike).

**Results:** Of the 321 FSW included in the cohort, 48% had at least one regular client at inclusion. The median number of regular clients was 2 [IQR, 1-6]. The median age of these regular clients was 27.6 years [IQR, 17-50], 70% lived in couple and 25% had at least a high school education. Merchants were the most represented professional category among regular customers with 30.25%. Most of the regular clients did not reside permanently in Ouagadougou (93.24%) and some travelled frequently (48.32%). The median duration of the relationship between regular clients and FSWs was 1.5 year. In the past month, 76.26% of regular clients had consistently used condoms and 85.47% at the time of last sexual intercourse. In the last 12 months, these regular clients also had sexual intercourse with the following partners: regular partners (66.20%), occasional partners (54.75%) and with another TS (33.24%). The multivariate model with a random effect was the best multivariate model. The results of the multivariate analysis revealed that the variables associated with systematic use of condom were the number of sexual intercourse [adjusted odds ratio (aOR) = 0.18; IC95%: 0.07-0.52 p=0.001] and having sex with an occasional partner (aOR= 6.84; CI 95% 2.66 - 17.61 p=0.0003).

**Conclusion:** Our study showed that about 50% of FSW have regular clients. They have a high rate of condom use with TS and this rate increases with the number of sexual encounters and among regular clients who have multiple occasional partners. These results are very useful for the implementation of the combined prevention packages given to FSWs in West Africa, especially in Burkina Faso.

**Keywords:** Regular clients, Female Sex Workers, Sociodemographic and behavioural characteristics, systematic condom use.



## TUPEC146

### Prevalence of HIV Infection and Associated Risk Factors among People who Inject Drugs in Dar Es Salaam, Tanzania: A Signal of Successful Interventions

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**Background:** Prevalence of HIV among People Who Inject Drugs (PWID) have been reported to be higher than that of the general population. The aim of the present study is to estimate the prevalence of HIV and associated risk factors among PWID in Dar es Salaam, Tanzania to inform HIV programming

**Methods:** An Integrated Bio-Behavioral Survey (IBBS) using a Respondent Driven Sampling (RDS) was used to recruit PWID residing in the metropolitan City of Dar es Salaam. Data on socio-demographic characteristics, injecting and sexual behaviors were collected through face to face interview. Blood samples were also collected and tested for HIV infection using the national HIV testing algorithm.

Weighted logistic regression analysis was done to determine independent risk factors for HIV infection

**Results:** A total of 611 PWID with mean age of 33.8 years (SD 7.2) were recruited through 4 to 8 recruitment waves. A majority of the study participants were male (94.4%), had completed primary school education (70.2%) and reported being self-employed (75.0%). The overall weighted prevalence of HIV infection was 8.7% (95%CI: 6.4-11.8). Younger age (< 25 years) [adjusted odds ratio (aOR)=0.07; 95%CI, 0.01-0.57], being single (aOR=0.31; 95%CI, 0.05-0.95), and having used a sterile needle at last injection (aOR=0.24; 95%CI, 0.06-0.91) were associated with lower odds of HIV infection. Having injected drugs for more than ten years as compared to one year was associated with increased odd of HIV infection. (aOR=37.41; 95% CI, 1.06-51.8)

**Conclusions and Recommendations:** The HIV prevalence we report among PWID in Dar es Salaam is notably lower than a previous estimate from xx years ago (15.5%) and may be a sign that ongoing HIV prevention interventions in this population is having an impact. However, PWID in Dar es Salaam still have almost twice as high prevalence of HIV infection as that prevailing in the general population. Risky injecting practices play a major role in HIV transmission among PWID, and this calls for a scale up of the implementation of the existing Comprehensive HIV Prevention and Treatment Guideline.

## TUPEC147

### HIV Incidence and Correlates of Seroconversion among Female Sex Workers Enrolled in a Routine Program for HIV Prevention Services in Rwanda

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**Background:** In many Sub-Saharan African countries, female sex workers (FSW) are considered as one of the main drivers of the HIV/AIDS epidemic. We assessed the incidence of HIV and its correlates among HIV-negative FSW recruited from an ongoing program providing HIV prevention and treatment services to FSW in Rwanda.

**Methods:** FSW were recruited from known hotspots of commercial sex activity and invited to a nearby health centre for HIV, STI and reproductive health services. HIV-negative FSW who had at least one follow-up HIV test through May 2019 were included in the present analysis. HIV incidence was calculated as the number of seroconversions divided by the person-time of followup, and reported as the number of new infections per 100 person-years. Cox regression analysis was used to estimate univariable and multivariable adjusted hazard ratios (aHR) for correlates of HIV seroconversion.

**Results:** From November 2015 to December 2018, we enrolled 15728 FSW from 20 out of the 30 districts of Rwanda. The prevalence of HIV was 31.7% (95% CI: 31.0-32.5). Of the 10738 FSW who were HIV-negative at enrolment, 976 were not yet due for their first follow-up visit, and 8390 of the remaining 9962 HIV-negative FSW (84.2%) had at least one follow-up visit with an HIV test result. The median age of these FSW was 28 years (IQR: 23-34), the majority of them (76%) were living alone, 38% had ever been married, 28% reported to have a paying job, and 15% reported to have attended secondary school. On the day of enrolment, 60% of FSW reported no or inconsistent condom use, and 42% were treated for an STI. During follow-up, we documented 115 cases of seroconversion over 10661.3 person-years (PY), yielding an incidence of 1.08 per 100 PY (95% CI: 0.89-1.29). In multiple Cox regression analysis, the incidence of HIV among FSW decreased with increasing age (aHR per year: 0.94; 95% CI: 0.92-0.97), and increased among FSW with no other source of income (aHR: 1.82; 95% CI: 1.11-2.98), those who reported unprotected sex during follow-up (aHR: 1.75; 95% CI: 1.15-2.67), and those who were treated for an STI at enrolment (aHR: 1.71; 95% CI: 1.17-2.50).

**Conclusion:** The incidence of HIV in our program is lower than the one previously found in Kigali FSW. Our data indicate that HIV prevention programs targeting FSW should emphasize consistent condom use, prevention and treatment of STIs, and creation of job opportunities for this high-risk population

## TUPEC148

### Improved Access to Care and Treatment Services: A Case Study for Female Sex Workers in Rwanda

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**Issues:** In Rwanda, HIV prevalence is very high in key populations: estimated at 45.8%; especially for female sex workers (FSWs) according to 2015 Rwanda Demographic Health Survey (2015 RDHS). In General population, HIV prevalence has stabilised at 3% for over 10 years. It is in this regard that we focused on FSWs to reduce new HIV infections because they tend to be the chain of spread of HIV infection and Sexually Transmitted Infections (STIs). We sensitise and mobilise FSWs through peer educators on correct and consistent condom use and ensure linkage to Health Facilities, hence leading to increased uptake of effective care and treatment services.

**Descriptions:** The programme is implemented by Strive Foundation Rwanda (SFR) in Eastern Province of Rwanda (Rwamagana, Ngoma and Gatsibo Districts). The Data are collected on a quarterly basis from peer educators of FSWs, using referral and contra-referral forms as tools linking FSWs with health providers. When FSWs are linked to health facilities, they are oriented to a health package comprising of HIV Testing Services (HTS), Antenatal Care (ANC), (STIs), Family Planning (FP), Tuberculosis screening (TB), Sexual and Gender based violence (SGBV), Condom/lubricant supply and related services.

**Lessons learned:** Currently, both the peer educators of FSW, Health providers and beneficiaries have a common understanding (*mindset change*) on the health package for FSWs. Additionally, the local authorities and security organs fully grasped the need to protect and respect human rights of FSWs. As a result, among 1577 FSWs who have been mobilised and sensitised, 1180 FSWs managed to have access to care and treatment services with a rate of 74.8% compared to 41% before our intervention (714 identified & registered FSWs, 289 FSWs managed to have access to health services).

**Next steps:** Continued sensitisation and mobilisation activities among FSWs on HIV prevention in our areas of intervention, and ensuring appropriate linkage between health providers, local authorities, security organs and the project beneficiaries to cover the remaining 25.2% of targeted group who do not have access to medical services in catchment area. In addition, to achieve our goal of reducing HIV infection among FSWs, there is need for more effort in capacity building to increase basic knowledge of HIV&AIDS and STIs among peer educators who play a significant role in coordinating our beneficiaries.

## TUPEC149

### Correlates of Newly Identified HIV Infection at Baseline among Female Sex Workers in a Routine HIV Prevention Program in Rwanda

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**Background:** Female sex workers (FSW) in Rwanda are disproportionately affected by HIV infection and are considered a main driver of the HIV epidemic. We assessed the testing yield of newly identified HIV+ FSWs and its correlates among previously HIV- FSW at the time of enrolment in a national HIV prevention and treatment program.

**Methods:** FSW were recruited from hotspots of commercial sex activity and invited to a nearby health centre for services including HIV counselling and testing, screening and treatment of sexually transmitted infections (STIs), condom distribution, family planning, and same day linkage to HIV treatment. Previously HIV- FSW who were enrolled into the program between October 2015 - June 2019 were included in the analysis. Correlates of HIV yield at enrolment were assessed using multiple logistic regression analysis.

**Results:** From November 2015-June 2019, we enrolled 19088 FSW from 23 of 30 districts of Rwanda; 5077 (29.7%) were previously known HIV+. Of the 13895 FSW who were not previously known HIV+, 596 (4.3%) were found newly HIV+ at enrolment. The total prevalence of HIV was 29.8% (95% CI: 29.1-30.4). The median age of tested FSW was 28 years (IQR:23-34), most (74%) were living alone, 27% reported to have a paying job aside from sex work, and 16% reported having attended secondary school or higher. At enrolment, 63% of FSW reported no or inconsistent condom use and 41% were treated for STI. Multiple logistic regression analysis indicated that the testing yield of HIV was significantly higher among FSW with STIs at enrolment (yield: 6.51%; 95% CI:5.87-7.15 and OR:2.38; 95% CI:2.01-2.82), living in Kigali (yield: 5.91%; 95% CI:5.22-6.61 and OR:1.69; 95% CI:1.43-1.99), and living alone (yield:4.70%; 95% CI:4.30-5.11 and OR:1.45; 95% CI:1.16-1.80). Being employed (yield: 3.24%; 95% CI:2.67-3.81 and OR:0.77; 95% CI: 0.63-0.95), having at least a secondary-level education (yield: 3.65%; 95% CI:2.34-3.76 and OR:0.69; 95% CI:0.54-0.91), and consistent condom use with vaginal intercourse (yield: 3.18%; 95% CI:2.70-3.66 and OR:0.65; 95% CI:0.54-0.78) were associated with a lower testing yield.

**Conclusions:** Our program data indicate that HIV testing should focus on reaching FSWs in Kigali, those with STIs, and those who are living alone. In addition, HIV prevention programs targeting FSW should emphasize consistent condom use, prevention and treatment of STIs, and creation of education and job opportunities for this high-risk population.

## TUPEC150

### Facteurs Associés à Infection VIH des Professionnelles du Sexe (PS) dans la Zone de Santé de Katuba

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#### Indiquer le problème étudié, la question de recherche

**Contexte:** Les professionnelles du sexe constituent la population à risque élevé de contracter l'infection à VIH en Afrique subsaharienne. La R.D Congo présente une épidémie concentrée avec une prévalence nationale de 6,9% chez les PS. Cependant la Zone de Santé (ZS) de Katuba présente très peu d'information quant aux facteurs associés à l'infection chez cette population.

**Objectif:** Cette étude a eu pour objectif de déterminer les facteurs associés à l'infection à VIH chez les PS dans la ZS de KATUBA.

**Méthodes:** Nous avons effectué une étude transversale identifiant au total 346 PS dont 108 séropositives ayant fréquenté de façon régulière le centre de dépistage et de traitement des infections sexuellement transmissibles durant la période du janvier 2018 à Décembre 2018. La revue documentaire des différents registres et fiches de consultations a constitué la principale source d'information. L'utilisation de préservatifs, les antécédents d'infections sexuellement transmissibles (IST) et le statut marital ont constitué les principales variables étudiées. Les données ont été saisies et traitées à l'aide du logiciel Excel et, analysées à l'aide d'Epi-info version 7.2.2.6. Par ailleurs, une analyse bi-variée nous a permis d'établir les principales associations au statut sérologique.

**Résultats:** Il ressort de cette étude que la séropositivité chez les PS était de 31,2%. L'utilisation occasionnelle des préservatifs multipliait par 2 la probabilité de contracter la maladie (RR : 2,2 ; IC95% : [1,6-3,0] ;  $\chi^2=22,49$  ;  $p=0,000$ ). La séropositivité élevée chez les PS était statistiquement liée à la notion d'antécédent d'IST (RR: 2,82; IC95% : [1,95 – 4,08] ;  $\chi^2=36,23$ ;  $p=0,00$ ), mais n'était pas statistiquement liée à leur statut marital. (RR : 1,46 [0,66 – 3,24] ;  $\chi^2=1,03$  ;  $p=0,31$ ).

**Conclusions et Recommandations:** Cette étude nous montre que parmi les facteurs associés, les antécédents d'IST constituent le facteur majeur. Cela soutient les résultats du rapport sur l'enquête intégrée de surveillance comportementale et de séro-prévalence fait en R.D Congo (IST=31,8%). Il est important que l'éducation et la prévention du VIH dans ce groupe à haut risque soient renforcées.

## TUPEC151

### **Adherence to Treatment among Older Men who Have Sex with Men (35+) Living with HIV in 3 Local Government Areas of Lagos State - A Retrospective Cross Sectional Study**

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**Background:** There is increase in the HIV prevalence among Men who have Sex with Men from 13.5% in 2007 to 22.9% in 2014. · Among MSM in all states surveyed, HIV prevalence was above 10%. In Lagos state the HIV prevalence was highest (41.3%).

Antiretroviral therapy (ART) decreases the viral load to the point where an infected person is no longer, or much less, infectious to others. As a result, 'treatment as prevention' has become the cornerstone of UNAIDS's post-2015 global strategy to end AIDS by 2030.

As the expansion of treatment provision continues, and access improves, adherence becomes a determining factor in the impact of ART for both treatment and prevention.

Older MSM's (35years+) living with HIV particularly in resource limited settings face unique challenges which impede adherence both to medication and clinic appointments.

**Methods:** A retrospective cross sectional study of three local governments (Agege, Ifako, Mushin) in November 2017 where review of treatment files of older MSM's living with HIV receiving care in Heartland Alliance Lagos One Stop Shop under the IMHIPP project was undertaken. · Adherence level was determined by number of missed dosage up to 5 times.

A data collection mechanism was used to get socio-demographic/economic information of the older MSM's living with HIV from time to time as they were introduced into HIV care.

**Results:** Treatment files from 50 MSM's were reviewed.

The mean age was 39 years with all having only secondary education. About 72% [36] of the MSM's have the knowledge of ART and knows its importance. About 32% [16] of the MSM have missed more than 5 dosage of the drugs in the past 3 months. Majority of the MSM's 58.3% [29] practice Christianity as their religion. Anxiety of the MSM's has statistically significant impact with missing their dosage (Chi-sq=7.4, df=1, p-value=0.000). Access to medication, frequency of daily dose, lack of social support all displayed significant relationship with adherence to ART among MSM's.

**Conclusions and Recommendations:** Anxiety, access to medication, frequency of daily dose, lack of social support are factors associated with adherence to ART among MSM's living with HIV.

## TUPEC152

### Facteurs de Risque Associés à l'Utilisation de Condoms et de Gels Lubrifiants chez les HSH en Côte d'Ivoire

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**Introduction:** Les populations clé en particulier les hommes ayant les rapports sexuels avec les hommes (HSH) sont vulnérables au VIH/Sida comparativement à la population générale. L'utilisation du préservatif et du gel lubrifiant est recommandée chez les HSH pour éviter le VIH et les IST. Nous avons analysé l'utilisation des condoms et du gel lubrifiant au cours des rapports sexuels et les facteurs associés chez les HSH en Côte d'Ivoire.

**Méthodologie:** Les données de l'enquête transversale bio comportementale réalisée auprès de 1484 HSH en Côte d'Ivoire en 2016 ont été exploitées. Au moyen des méthodes d'analyses descriptives, l'utilisation de condoms et de gel lubrifiant et les facteurs de risque ont été déterminés. La méthode de régression logistique a été employée pour identifier les facteurs significativement associés à l'utilisation des condoms et du gel lubrifiant au cours des rapports sexuels avec un client. Les analyses ont été réalisées sous la version 15 de STATA.

**Résultats:** Les HSH interrogés sont jeunes avec un âge moyen de 24 ans. La quasi-totalité (93%) est allée à l'école. Durant la semaine précédant l'enquête, 82% des HSH ont eu des rapports sexuels dont 47% avec plus de 2 partenaires. Près de 40% avait une connaissance approfondie du VIH/sida. L'utilisation du gel lubrifiant et du condom par les HSH au cours du dernier rapport sexuel avec un client est estimée à 69%. (IC95% 66,9-71,7).

Les HSH qui ont eu des rapports payants plus de 10 ans étaient moins susceptibles d'utiliser le condom et le gel lubrifiant au cours des rapports avec un client (OR=0,49, IC95% 0,3- 0,79) comparativement à ceux qui ont moins de 2 ans. En revanche, la connaissance approfondie du VIH, l'appréciation positive de sa vie et l'infection au VIH sont positivement associées à l'utilisation de condoms et de gels lubrifiants avec les OR respectivement de 1,46 [IC95%, 1,0-2,1], de 2,19 [IC95%, 1,5-3,2] et de 1,7 [IC95%, 1,1-2,7].

Aussi, Il y a beaucoup plus de chance (OR=1,6, IC95% 1,02-2.6) pour les HSH ayant un niveau d'étude supérieur d'utiliser le condom et le gel lubrifiant que ceux de niveau primaire ou d'aucun niveau.

**Conclusion:** Les résultats suggèrent d'intensifier les interventions visant à accroître le niveau de connaissance du VIH et à générer une appréciation positive de la vie en ciblant davantage les HSH les plus expérimentés (pour rapports avec les hommes) et/ou ayant un faible niveau d'éducation.

**Mots clés:** HSH, Condom, Gel lubrifiant, facteur de risque

## TUPEC153

### Exploring the Linkage between Sex Work and Illicit Drug/Alcohol Use among Young Women in Accra Ghana

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**Background:** According to the UNAIDS, young women, aged 15-24 accounted for a quarter of all new HIV infections in sub-Saharan Africa in 2018. Young women who engage in sex work (SW) are at an elevated risk and those who use drugs/alcohol are particularly more vulnerable. Field evidence from Hope for Future Generations (HFFG), a local non-governmental organization indicates that drug use (DU) and SW among young women is on the rise in urban poor informal settlements in Ghana. Yet, there is a deficit of reliable context specific scientific data to inform appropriate interventions in this area. As part of the USAID Strengthening the Care Continuum project, led by JSI an exploratory study was commissioned to better understand the relationship between SW and DU among young women in Accra, Ghana

**Methods:** Qualitative methods were used to examine individual and structural level factors that influence SW and DU among young women. Six focus group discussions and three in-depth interviews were conducted from January to May 2018 in three purposively selected informal settlements in the Greater Accra region. Fifty-one adolescent SWs aged 15 to 24 years were recruited through respondent driven sampling.

**Results:** Most young female sex workers started as "kayaye" (head porters) and were economic migrants from the Northern parts of Ghana and later engaged in sex work. Majority of the participants indicated that they started SW by age 14. All participants in the study were using drugs or alcohol. The most commonly used substances were alcohol and tobacco, marijuana, "mixture" (cough syrups mixed with caffeinated drinks) and more high-level prescription drugs such as tramadol (an opiate). Although participants were aware of injecting drugs, none of them had used them or seen anyone using. Apart from money as compensation for sex work, some young women in the study exchanged sex for drugs. They also said that under the influence of the drugs, they sometimes lack self-efficacy to negotiate for condom use with their clients. A few of them said the drugs emboldened them to negotiate for better terms.

**Conclusions and Recommendations:** The study highlights the complex relationship between SW and DU among young women and their heightened vulnerability to HIV infections as a result of these combined behaviors. HIV services for young vulnerable populations should include screening for DU as the presence of drug use will require a more nuanced response



## TUPEC154

### **Improved Access to Services among MSM and Transgender Women for a 6-year HIV Prevention, Diagnosis and Care Program, Côte d'Ivoire**

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**Background:** From 2010 to 2017, Improve Access to Care and Treatment in Côte d'Ivoire (IMPACT-CI), implemented by Heartland Alliance International supported 22 local implementing partners providing services that cover 33 health districts within 16 regions of Côte d'Ivoire with an HIV prevalence among key populations (KPs).

**Methods:** In order to evaluate outcomes related to IMPACT-CI, questions on program exposure and access to services were included in the 2016 integrated bio-behavioral survey (IBBS) implemented by the U.S. Centers for Disease Control and Prevention and Heartland Alliance International. The IBBS which also survey demographic characteristics, behavior, and HIV and STI prevalence among MSM and TGW. Using STATA version 15.1, we constructed frequency tables between program exposure and other variables and used Pearson's chi-square ( $\chi^2$ ) to test if the differences of the proportions broken out by these factors were statistically significant between those who were exposed to IMPACT-CI programming.

**Results:** A total of 1,484 MSM/TGW were approached of whom 97% [95% CI: 96.9-98.4 n=1,451] consented to the interview and 85% [CI: 83.5-87.1 n=1,267]. About one half: 50.1% (718/1,484) of MSM/TGW had participated in IMPACT-CI programming. Of these, 97.1% (n=697) participated in interpersonal behavior change communication activities, 95.1% (n=683) were tested for HIV, 83.1% (n=597) were tested and treated for sexually transmitted infections, 27.2% (n=195) received a home visit, 17.0% (n=122) participated in a support group and 11.1% (n=80) received ART (not offered directly by the project). IMPACT-CI beneficiaries were more likely to have had an HIV test in the last nine months: 70.2% (485/691) than non-project MSM/TG (29.8% 206/691) ( $\chi^2 = 280.75$  P.  $\leq 0.001$ ); to express that they have access to HIV services: 58.2% (513/882) vs. 41.8% (369/882) ( $\chi^2 59.59.40$  P.  $\leq 0.001$ ) and STI services: 59% (510/864) vs. 41% (354/864) ( $\chi^2 = 68.5$  P.  $\leq 0.0001$ ). In addition, IMPACT-CI participants were less likely to feel intimidated in talking with a health worker: 45.7% (198/433) vs. 54.3% (235/433) ( $\chi^2 6.98$  P.= 0.008). There was no significant difference about knowledge of HIV.

**Conclusions:** Periodic evaluation activities in the community are essential to understand the proportions of key populations reached, their profiles as well as positive and negative effects. However, it is critical to ensure that surveys used are able to collect treatment and care data.

## TUPEC155

### **Building a Sustainable Approach to HIV Services for Key and General Populations: FHI 360, LINKAGES Project Entry in Liberia**

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**Issues:** With support from the U.S Agency for International Development (USAID) and the U.S President's Emergency Plan for AIDS Relief, the FHI-360 led LINKAGES project was invited to complement HIV prevention, care and treatment services for key populations (KPs) in Liberia. The country has an HIV prevalence of 2.1% among the general population, 9.8% among female sex workers (FSWs) and 19.8% among men who have sex with men (MSM). Almost half of the estimated 163000 FSWs and 74000 MSM are in Montserrado County. Liberia has high levels of stigma for PLHIV and KPs. The project employed innovative strategies to gain successful entry into the community of beneficiaries, reduce stigma and improve KP friendly services health facilities.

**Descriptions:** With the support of leadership of National AIDS and STI Control Program (NACP), LINKAGES convened a situation analysis and buy-in meeting in Monrovia with key players, including Global Fund implementers of KP programming, civil society and KP led organizations in Montserrado County in December 2018. USAID and NACP facilitated prioritization of and collaboration with health facilities. Site based trainings were conducted for all staff, including security, front desk, administration and medical staff at 10 facilities to create stigma and discrimination free services and make facilities safe spaces for KPs.

**Lessons learned:** The project helped staff understand their key role in HIV services provision and partnering with peer outreach workers from the community to be welcoming and accepting of KP individuals coming for health services. Health facility leadership supported LINKAGES in the recruitment of Linkage Retention Coordinators (dedicated nurse or clinician) at each facility to coordinate HIV testing of referred KP individuals, link them to treatment, and follow up all patients who were lost to follow-up from the facilities. During the first two months implementation of HIV services, the Project reached 3140 KPs with comprehensive package. HIV testing was provided to 2050 out of the targeted 3049 (67%). HIV case finding was 274 (13%). Those immediately initiated on antiretroviral therapy were 246 (90%). The remaining ones are being followed up.

#### **Next steps:**

- The commitment of national leadership at NACP and facility leadership created an enabling environment and will be intensified
- Continuous and effective engagement of health facility leadership and staff on provision of inclusive HIV services will continue

## TUPEC156

### **Infection à VIH chez les Hommes Ayant des Rapports Sexuels avec des Hommes (HSH) Suivis au Centre Hospitalier Régional de Saint-Louis (Sénégal)**

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**Contexte:** La lutte contre la pandémie du VIH passe nécessairement par le contrôle de l'infection dans les populations clés. L'épidémie du VIH est de type concentrique au Sénégal avec une forte prévalence dans la population des HSH. Notre objectif était de décrire les aspects épidémiologiques, cliniques, immuno-virologiques, thérapeutiques et évolutifs chez HSH, au Centre Hospitalier Régional de Saint-Louis, au Sénégal.

**Méthodes:** il s'agit d'une étude rétrospective, transversale, descriptive et analytique, concernant les HSH infectés par le VIH suivis au Centre Hospitalier Régional de Saint-Louis. La saisie et l'analyse des données ont été effectuées grâce au logiciel Epi info7.

**Résultats:** Parmi les 289 patients suivis dans notre cohorte, 49 patients étaient des HSH soit une prévalence de 17%. L'âge médian était de 30 ans avec des extrêmes de 21ans et 62 ans. La tranche d'âge la plus représentative était comprise entre 16 et 30ans avec 27 cas (55,1%). Sur le plan professionnel, les tailleurs et les commerçants prédominaient avec respectivement 9 cas (22,5%) et 5 cas (12,5%). Les célibataires étaient majoritaires avec 35 cas (79,5%). Le suivi des patients a été instauré dans le cadre d'une prise en charge dans 27 cas (55,1%) et d'un dépistage volontaire dans 22 cas (44,9%). Les stades cliniques 1 et 3 étaient majoritaires avec respectivement 21 cas (46,7%) et 13 cas (28,9%). Le poids moyen actuel des patients sous traitement [65 kg  $\pm$ 9,6 kg] était supérieur au poids moyen à l'inclusion [58,5kg ( $\pm$ 11,6 kg)] ( $p=0,48$ ). L'infection par le VIH-1 prédominait avec 48 cas (98%). Le taux de lymphocytes TCD4+ moyen sous traitement ARV [394,7 $\pm$ 226,2cell/mm<sup>3</sup>] était supérieur à celui de l'inclusion [343,8 $\pm$ 261,2cell/mm<sup>3</sup>] ( $p=0,45$ ). La charge virale moyenne était de 12679 copies/mm<sup>3</sup> ( $\pm$ 30916). La charge virale était dosée chez 25 patients (51%) parmi lesquels 13 patients (52%) avaient une charge virale indétectable. Le dosage de l'AgHBs a été réalisé chez 45 patients (91,8%) dont 4 positifs soit une séroprévalence de 8,9%. Les schémas TDF-3TC-EFV et TDF-FTC-EFV étaient les plus prescrits avec respectivement 24 cas (53,3%) et 12 cas (26,7%). La durée de suivi moyenne était de 2,6 ans  $\pm$ 3ans. On avait 11 perdus de vue (22,4%) et 3 cas de décès (6,1%).

**Conclusions et Recommandations:** Une meilleure connaissance des caractéristiques de la population des HSH est importante pour mieux lutter contre l'infection à VIH au Sénégal.

## TUPEC157

### **Increasing Access to HIV Services for Key Populations in Nigeria: Early Lessons from One-stop-Shops**

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**Issues:** An effective program for key population (KP) across the different KP subgroups and age groups is important towards achieving epidemic control of HIV. With treatment as a form of prevention (TasP), public health efforts have recently been directed towards key population groups who drive the epidemic. However in Nigeria, cultural rejection and legislation against same-sex marriages and sex work pose a challenge to KP members identifying with the group and access to HIV KP programs.

**Descriptions:** The FHI360 Global Fund (GF) HIV program in Nigeria currently supports One-stop-shops (OSS) in 3 states which provide comprehensive HIV care and treatment services for Female Sex Workers (FSWs), Men who have sex with Men (MSM), People who inject drugs (PWID) and Transgender people (TG). Others include clients of KPs, their biological contacts, adolescent girls and young women (AGYW). Also, the program identified KP-friendly health facilities where Health care workers (HCWs) were trained to provide services tailored to the specific needs of the KP subgroups. An analysis of data on the clients enrolled on treatment since inception in October 2018 at the 3 GF-supported One-Stop-Shops (OSS) in Imo, Oyo and Kano States was done in July 2019.

**Lessons learned:** Establishment of OSS for KPs has been successful in treating KPs living with HIV in Imo, Oyo and Kano states in Nigeria. One thousand, one hundred and twenty-four clients have been enrolled in HIV care and treatment at these 3 OSS. The clients were 50.3% female and 49.6 % male. The KP subgroups by percentage were MSM 44.7%, FSW 31.7%, PWID 0.7%, TG 0% and others 22.9%. The OSS client distribution by age groups were Teenage (< 20) 3.8%, young adults (20-34 years) 71.6%, midlife (35-50 years) 21.4%, and mature adults (>50 years and above) 3.1%.

**Next steps:** The FHI360 GF program is opening 7 new OSS and 66 KP-friendly health facilities in 7 other states in Nigeria for wider coverage in the country. While prioritizing resources towards reaching more MSM and FSW subgroups with the highest HIV prevalence, strategies to increase case findings among TG and PWID will be explored to achieve maximum reach to these subgroups.

## TUPEC158

### Awareness and Likelihood of PrEP Use among Female Sex Workers in Kisumu, Kenya

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**Background:** Globally, female sex workers (FSW) are disproportionately burdened *with* HIV. PrEP is highly effective against HIV infection when taken as prescribed; however, questions about likelihood of its use remain. Understanding the psychosocial determinants of likelihood to initiate PrEP among FSW will be key in developing strategies to create demand for PrEP and enhance its uptake and continued use.

**Methods:** We purposively sampled FSW aged 18 to 24 years from pre-specified hotspots in Kisumu county, Kenya. Eligibility included self-reported HIV-negative or unknown status. Demographic and behavioural information, including awareness and intent to use PrEP, was obtained via a cross-sectional survey. Chi square test was conducted to ascertain differences between FSW ever and never on PrEP. Goodman and Kruskal's gamma test was used to identify the likely predictors of intent to use PrEP.

**Results:** We enrolled 200 FSW: median age was 22 years (IQR: 20-23), 55% had at least secondary education, 89% were single, 84% reported consensual first sex, 50% had sexual debut by age 15 and 85% were Luo. 83% of the FSW had previously heard of PrEP whereas 13.5% had used PrEP. Most FSW were willing to take PrEP (30.5% "extremely likely", 33.0% "very likely", 19.5% "somewhat likely") and perceived PrEP to be a good method of protection against HIV (64% "strongly agree", 19.5% "agree"). Public health facility was the most preferred (66%) point of provision. PrEP awareness ( $p=0.011$ ) and preferred point of provision ( $p<0.001$ ) differed significantly between FSW ever and never on PrEP. Comfort in seeking PrEP from healthcare provider and likelihood telling friends, male clients or main partner that they are on PrEP were similar across these two groups. Ethnicity ( $p=0.002$ ), number of sex partners ( $p=0.042$ ), sex work (last month) ( $p=0.019$ ) and HIV testing ( $p=0.012$ ) were associated with willingness to take PrEP but marital status ( $p=0.053$ ), condom use (last sex) with paying ( $P=0.439$ ) or non-paying ( $p=0.650$ ) sex partner and history of either sexually transmitted infections ( $p=0.873$ ) or forced sex ( $p=0.799$ ) had no effect on willingness to take PrEP.

**Conclusions and Recommendations:** Majority of FSW reported intent to use PrEP and likelihood of resultant disclosure. We found several factors that seem to influence uptake of PrEP among young FSW. Such factors should be considered in national PrEP implementation agenda as part of Kenya's comprehensive response to the AIDS epidemic.

## TUPEC159

### Tackling HIV/TB Comorbidities in Nigerian Prisons: A National Study

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**Background:** People in prisons (PIP) are key populations not only for HIV and other sexually transmitted infections (STIs) but also for tuberculosis (TB) and Hepatitis B (HBV) and C (HCV). Penal institutions all over the world are considered environments for fast and uncontrolled spreading of HIV and Hepatitis B due to many risk factors including unsafe sexual practices as well as poor health care and living conditions. We assessed prevalence of HIV/AIDS and presumptive TB among PIP in Nigeria.

**Methods:** A cross-sectional descriptive study was employed for the assessment. The study covered twelve prisons across the six geopolitical zones. HIV was assessed using single algorithm while TB was assessed using clinical screening of symptoms. Descriptive statistics with 95% confidential interval was conducted for key outcome variables while Chi Square test was used to assess differences between categorical variables. Ethical approval was obtained from the National Health Research Ethics Committee.

**Results:** Overall, HIV prevalence was 2.8% among people in prison, and it was higher among female prisoners (6.9%) than males (2.7%). It was highest among those with no formal education (3.8%) and among those older than 45 years (8.1%). Overall, presumptive TB was 46% and this was similar for both males and females. Presumptive TB was higher among older people in prisons compared to younger ones. By geopolitical zone, it was lowest in the North East (17%) and highest in the South South (71%). All presumptive TB cases were referred to the prison clinic for diagnosis.

**Conclusions and recommendations:** HIV prevalence among PIP was double that of among the general population. The symptomatic screening of TB using clinical signs has been shown to be effective in identifying TB. This findings indicates also a high risk of HIV/TB comorbidities. The need for a strengthened HIV/TB programs must be instituted to enhance early detection and subsequently treatment to reduce HIV&TB comorbidities.

**Keywords:** HIV, TB, prisons, comorbidities,

## TUPEC160

### **Barriers to Uptake of HIV Prevention Services among Men who Have Sex with Men in Nigeria**

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**Background:** Men who have sex with men (MSM) remain the most HIV-infected and affected subpopulation in Nigeria. Many MSM still lack sufficient access to HIV prevention services, despite ongoing scale-up of comprehensive HIV testing services. The study aimed at identify barriers to HIV testing and counselling services (HTS), condom and lubricant use among MSM.

**Method:** The study was a cross sectional design using a qualitative method of data collection. A random sampling technique was used to select four hot spots from the sampling frame of mapped hot spots in Benue state. Data was collected using a focused group discussions (FGD) guide (four batches of FGDs with 10 participants each) to elicit information about barriers to accessing HIV prevention services and other demographic information. Response from FGD was transcribed and analysed for proportions.

**Result:** The mean age of the respondents was 27 years while the mean age of first sex with men was 19 years. Most (65%) MSM have secondary education while 65% have an average of two sexual partners. Majority of the respondents reported that financial constraint (87.2%), inadequate supply of condom and lubricant (70.0%) and poor knowledge on safe sex practice (65.2%) were major constraints to accessing condom and lubricants. The key new findings that hinder access to HIV testing services were Non availability of MSM friendly sites (89.0%) and safe space for counselling and testing services (91.2%). Other were major contribution of low access to HTS among MSM were: fear of rejection by family members if disclosed HIV status (65.0%), fear of being discriminated by the society (55.3%) lack of confidentiality (52%) and poor attitude of health workers (52.8%).

**Conclusion and Recommendation:** The study revealed the critical areas that hinder uptake of HTS services. Efforts to scale up HIV prevention services among MSM should be combined with structural interventions to reduce stigma, reverse anti-gay law and increase investment in MSM-specific HIV services.

**Keyword:** HIV, MSM, Barrier, Uptake, HTS

## TUPEC161

### **Pattern of Sexual Violence and Risk of HIV Transmission among Female Sex Workers in Nigeria**

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Female sex workers (FSWs) continue to experience a heavy HIV burden over three decades into the global HIV epidemic. Thus, mitigating risks for acquisition and transmission among this group remains an international concern. The study aimed to determine the effect of violence on HIV programming among sex workers.

**Methodology:** A cross-sectional study was conducted among FSWs drawn from Brothel and Non-Brothel Based in Nigeria. A systematic random sampling method was used to select 4593 FSWs from their clusters. A structured questionnaire was adapted from the IBBS 2014 to elicit information. Data analysis were managed using SPSS version 24.0 software. Descriptive data were analysed while Bi variate and multivariate analysis were carried out to establish associations.

**Result:** The mean age of the Female Sex Workers (FSWs) was 28±6. The common violence against FSWs reported in this study was harassment by closing brothel (13%), harassment for following clients' home (9.3%), harassment by police (8.0%), harassment in event festival (8.0%), conflict with brothel Manager/ pimp/colleagues (4.1%). About one third (30.2%) of FSWs have ever been arrested by the police and other security operatives while (14.0%) and (21.2%) were arrested very often and once in a while respectively. Majority (58.8%) of the FSWs said that reasons for arrests were explained by the police. Almost (97.3%) of the FSWs did not hire a lawyer while only 10.6% had a free legal aid for release. Violence was more among brothel based FSW (BBFSW) than Non-brothel Based FWS (NBBFSW). BBFSW ever been arrested by police or any other law enforcement was 58.6% compared to 41.4% NBBFSW ( $P < 0.05$ ) while Harassment from other law enforcement agents was higher for BBFSW (67.5%) compared to NBBFSW (32.5%). BBFSW are more likely to use free legal aid during arrest compared to NBBFSW (OR = 0.454; CI = 0.307 -0.671).

**Conclusion and recommendation:** The study showed significant level of violence against FSWs. However, effort should be made to develop a robust strategy to promote increased uptake of legal aid among FSWs.

**Keyword:** HIV, Sexual Violence, FSWs, Pattern



## TUPEC162

### **Alcohol Misuse and Illicit Drug Use among Occupational Groups at High Risk of HIV in Sub-Saharan Africa: A Systematic Review**

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**Background:** Key occupational groups in sub-Saharan Africa are at increased risk of HIV, and may be at increased risk of alcohol misuse and illicit drug use, due to common occupation-related factors. We systematically reviewed literature on the burden of alcohol misuse and illicit drug use and their association with HIV, among these high-risk occupational groups, and identify priority areas for future research.

**Methods:** In January 2018, we systematically searched for studies reporting prevalence of alcohol misuse or illicit drug use and their association with HIV among fisherfolk, uniformed personnel, truckers, miners, motorcycle riders and sex workers in sub-Saharan Africa, with no language restrictions. We used Cochrane guidelines to conduct the review and summarised results following Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. The systematic review protocol was registered (<http://www.crd.york.ac.uk/PROSPERO> CRD42016053495).

**Results:** Seventy-one studies published between 1983 and 2017 were included: 35 reported data on alcohol misuse and 44 data on illicit drug use (eight included data on both). Nineteen studies used the Alcohol Use Disorder Identification Test (AUDIT), 5 used the Cut down, Annoyed, Guilt, Eye-opener (CAGE) tool and one study used both. Median prevalence of alcohol misuse based on AUDIT/CAGE was 32.8% (IQR 20.8%-48.5%). Prevalence of illicit drug use ranged from 0.1% (95%CI: 0.0%-0.2%) for injection drug use to 97.1% (95%CI: 85.1%-99.9%) for khat (among uniformed personnel). Among papers examining association with HIV, 17 papers reported on associations between substance use and HIV (of which seven (40%) reported a significant positive association).

**Conclusions and recommendations:** Prevalence of alcohol misuse and illicit drug use was often high in high-risk occupational populations in Sub-Saharan Africa, and often associated with HIV. Harm reduction interventions in occupational settings are urgently required to prevent new HIV infections.

## **TUPEC163**

### **The Health and Well-being of HIV Positive Men who Have Sex with Men (MSM) Selected from Ore, Akungba, Ondo, Akure, Owo and Okitipupa, Ondo State, Nigeria**

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**Background:** This study provides insight into the cause of increased morbidity and mortality among HIV positive men who have sex with men (MSM) in 6 towns located in Ondo State, Nigeria. We evaluated the major causes of death among HIV reactive MSM.

**Methods:** A total of 30 MSM, aged 18-24 years living in Ore, Akungba, Ondo, Akure, Owo and Okitipupa were recruited randomly using respondent-driven sampling. Participants completed a questionnaire on the health and well-being of HIV positive MSM.

**Results:** A high proportion of MSM reported high-risk behaviours, including unprotected anal sex with men (40%) and not taking their drugs religiously (50%). Forty percent of the participants from Ondo, Akungba, Owo, Okitipupa and Ore reported that the major causes of death amongst MSM in their areas were negligence, ignorance and religious beliefs (especially that AIDS is a spiritual attack). Sixty percent of Akure participants revealed that religion and blatant refusal to seek medical help were major causes of death amongst MSM in that area.

**Conclusions and recommendations:** HIV prevalence among MSM in the Nigerian population is relatively high. Hence, there is need for the government to ensure that MSM have easier access to healthcare facilities without being stigmatized. Non-governmental organisations and other donor agencies should increase their efforts in ensuring dissemination of information especially in rural areas regarding HIV/AIDS treatment and management.

## TUPEC164

### HIV/AIDS among Internally Displaced Persons in Northeastern Nigeria

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**Background:** Insurgent activities of Boko Haram in North-Eastern Nigeria in the past 6 years led to the displacement of over 2 million persons mostly women and children. Internally Displaced Persons (IDPs) especially Women and girls are more susceptible to HIV due to gender discrimination punctuated by violence, and worsened by poor access to HIV preventive information and services, inability to negotiate for safer sex, and lack of female-controlled HIV preventive methods. With support from Stop TB Partnership through its TB REACH Wave 5 grants, a project was launched in IDP Camps and Host Communities in Adamawa, Gombe and Yobe States of North Eastern Nigeria. This paper aims to demonstrate results of 15 months Active HIV (and TB) screening in IDP Camps and Host Communities.

**Methodology:** The processes involved mapping of IDP camps and Host Communities including key stakeholders, identification and engagement. Volunteers and Health Care Workers were identified and trained on HIV Counseling and Testing Services and TB screening using standardized National training tools. Systematic HIV and TB screening of IDPs in Camps and Host Communities through tent to tent, House-to-House and outreach services. Sputum samples were collected, transported and analyzed using GeneXpert equipment. HIV positive clients are accompanied to ART centers for enrolment while preventive services were offered to HIV negative individuals.

**Results:** Of the estimated 304,000 IDPs, 58,975 (19%) made up of 31,672 males and 27,304 females had HTS and received results out of which 874 (1.5%) made up of 344 (40%) males and 530 females were found to be HIV positive. Of all HIV cases detected, 659 (75%) were detected during mass outreach screening at IDP camps and host communities. Of all HIV positive cases detected, 280 (32%) were diagnosed with TB/HIV co-infection; the observed rate of co-infection is higher than HIV rates among TB patients in Nigeria (22%). Diagnosed HIV and TB cases were actively linked to treatment, care and support services.

**Conclusion and recommendation:** IDPs have high rates of HIV and TB/HIV coinfection. Systematic targeting of IDPs communities and other key populations with risk-reduction education and methods, HTS services and a stronger collaboration with key stakeholders is recommended for adequate control of HIV (and TB) among IDPs and other key populations.

**Keywords:** Internally Displaced persons, HIV, TB, Adamawa, Gombe, Yobe, Nigeria

## TUPEC165

### **Following Fish to Net and Retain Female Sex Workers (FSW) and Their Clients (CFSW) to ART: The Case of YONECO Zomba Drop in Center**

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**Background:** Youth Net and Counselling (YONECO) is implementing the Linkages project in the districts of Machinga and Zomba with financial and technical assistance from USAID through FHI360. The projects targets Female Sex Workers (FSW) and their Clients and children as priority populations within the risk network of contracting HIV and AID. In Zomba the project targets to reach and provide a continuum of services to 1,268 FSW and 1211 CFSW, currently working with 28 Clustered Hotspots, and 24 Hybrid facilities to accelerate service delivery to the targeted key population.

**Issues:** Between January 2019 and March 2019 YONECO Zomba DIC experienced low uptake of HTS services and clinical care among FSW.

**Descriptions:** To address this, YONECO engage the identified and trained peer educators and navigators in the project, and it was discovered that most of the lost FSWs have camped in Lake Chirwa Islands in Zomba where fishing is at peak and money is exchanging hands among fishermen and fish dealers. In collaboration with the office of the DHO in Zomba, YONECO organized a comprehensive outreach activities to offer HIV Testing Services, STI Screening and Treatment, ART initiation and refill, and Viral load screening (sample collection for eligible FSWs).

**Lessons learned:** From the outreach interventions in Lake Chirwa Islands, 215 FSW were reached, out of which 137 known positives received ART refills, 69 were due for viral load and samples were collected, 78 tested for HIV and 10 tested positive and were all initiated on ART, 215 were screened for STI and 8 were diagnosed and treated. Through the same interventions, 101 Clients of FSWs were reached and offered continuum including, 89 known positives received ART refills, 21 were due for viral load and samples were collected, 12 tested for HIV and 5 tested positive and all were initiated on ART, 101 were screened for STIs, and no one was diagnosed. During the scouting and follow up of FSW and their Clients around Lake Chirwa Islands 3 new Hotspots were also identified; Namakwaira, Thongwe, Malongwe, and Chidya Phini.

**Next steps:** YONECO focuses on providing quarterly comprehensive outreach activities in the Lake Island sites including the newly identified hotspots where fishermen are located. Furthermore, scaling up has also been done to other commercial sites where FSW are following their clients in districts including market places in the peak of Rice, and Maize sales.

## TUPEC166

### Offre des Services de Promotion des Droits Humains et de Service Juridique aux Populations Vulnérables et aux Populations Clés en Côte d'Ivoire

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**Problème:** L'Etat de Côte d'Ivoire s'est engagé à travers la loi N° 2014-430 du 14 juillet 2014, portant régime de prévention, de protection et de répression en matière de lutte contre le VIH et le sida (loi VIH) à améliorer la jouissance du droit à la santé pour tous. Cependant bien que promulguée, les données d'une étude récente indiquent que 82,6% des PVVIH ne connaissent pas la loi VIH tandis que 83,7% dont les droits ont été violés, n'ont jamais cherché à exercer un recours légal, quand 40,4% ont vécu au moins une expérience de stigmatisation. Face à cette situation, Alliance Côte d'Ivoire, a initié des interventions en vue de promouvoir les droits humains dans 25 districts sanitaires.

**Description:** Une séance de formation des juristes sur le VIH/sida a été réalisée. Ceux-ci se sont appuyés sur les ONG membres et partenaires d'Alliance Côte d'Ivoire pour la mobilisation communautaires (les leaders religieux/ communautaires, autorités administratives, sanitaires et politiques, PVVIH, populations clés, associations de femmes et de jeunes des localités ciblées. Ces activités : (1) sensibilisation des populations sur les droits humains avec un focus sur la loi VIH, (2) consultation et d'écoute juridique qui ciblent particulièrement les PVVIH et les populations clés ayant des besoins, qui sont identifiés et orientés par les agents communautaires vers les salles de consultations dans la discrétion et la confidentialité. Les juristes assurent la référence des cas graves vers les juridictions des localités.

**Leçons apprises:** Les activités des consultations juridiques foraines ont permis de sensibilisées 2 732 personnes dont 1 124 Hommes et 1 608 Femmes. Parmi ces personnes sensibilisées, 1305 PVVIH et population clé ont bénéficiées d'écoutes juridiques dont les préoccupations ont porté notamment dans 25% des cas sur les rejets du foyer du fait du statut séropositif, 18% sur la stigmatisation et la discrimination liées au VIH dans le cadre familial et 16% sur les pertes d'emploi liées au statut VIH. Ces activités permis aux populations bénéficiaires d'exprimer leurs besoins en matière de droit et de bénéficier d'une assistance juridique.

**Prochaines étapes:** Les interventions se poursuivront et seront étendues du territoire national pour l'assistance juridique aux populations cibles victimes de la violation de leurs droits liées au VIH. Le soutien aux victimes de violation des droits pour ester en justice sera de mise.

## TUPEC167

### High HIV Incidence among MSM with Special Needs (Deaf & Dumb) in Benue State, Nigeria

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**Background:** HIV/AIDS amongst other Sexually Transmitted Infections (STIs) has become a serious epidemic peculiar to the MSM community in Benue State and Nigeria at large, contributing hugely to the alarming national prevalence currently at about 1.4% - Nigeria HIV/AIDS Indicator and Impact Survey (NAIIS 2018). Even though the Benue State HIV prevalence dropped from 5.6% to 5.3% (NARHS 2013, NAIIS 2018 respectively), the national prevalence among the MSM community is on a continuous increase recorded at 17.2% & 22.9% (IBBSS 2010, 2014 respectively). This means that, the alarming HIV prevalence within the MSM community (as a part of the key populations), contributes a great deal to the overall national prevalence caused by some key socio-cultural factors. Such factors are unprotected sex, multiple partnering, unfavorable policies, high illiteracy, drug misuse/abuse etc. Hence, the need to focus more towards halting and reversing the epidemic within the MSM community and other sub-groups that are most vulnerable to HIV, like deaf & dumb MSM. On this study, we aimed to determine specifically the rate of HIV incidence among deaf & dumb MSM, as well as its key drivers.

**Methods:** Secondary data collected from THEDI previous programs for MSM does not specifically distinguish between deaf/dumb MSM and others. The study was on for two (2) months; June - July, 2019. 13 deaf & dumb MSM from different parts of Benue State were reached with HIV testing services through Interpersonal Communication or private counselling sessions at THEDI Community Center. An interpreter who is skilled in sign language was engaged (for the period of study) to interpret the counselling sessions between the facility-based Counselor-tester and the Program participants. There was a shared confidentiality signed to allow the Interpreter access to the sessions to interpret the counseling & testing sessions between the Counselor-tester and the program participants effectively.

**Results:** HTS conducted on 13 Deaf & Dumb MSM in Benue State showed an alarming 38% prevalence with the subgroup as seen in the age disaggregate below:

No. of D&D MSM tested- 8 (20-24yrs), 5 (25-29yrs).

No. of D&D MSM tested pos - 4 (20-24yrs), 1 (25-29yrs).

This means that HIV incidence is higher among D&D MSM within ages 20-24.

**Conclusions and recommendations:** The high incidence among Deaf & Dumb MSM makes it key to tailor programs to cater for their specific needs to ensure inclusivity.

## TUPEC169

### Prévalence et Déterminants du Cancer du Col Utérin chez les Femmes Vivant avec le VIH à Parakou en 2017

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**Background:** Les lésions précancéreuses du col utérin sont fréquentes chez les Femmes vivant avec le VIH (FVVIH). L'Objectif de cette étude était de déterminer la prévalence. Des lésions précancéreuses du col utérin et leurs déterminants chez les FVVIH à Parakou en 2017.

**Methods:** Il s'agissait d'une étude transversale à visé analytique allant du 5 Septembre au 6 novembre. Elle a porté sur 200 femmes consentantes, vivant avec le VIH. Les femmes présentant des lésions précancéreuses à l'IVA/IVL, ont bénéficiées d'une biopsie. Le seuil de significativité était de 5%. La régression log-binomiale a été utilisé pour identifier les déterminants.

**Results:** Au total 200 femmes ont été inclus dans l'étude. L'âge médian était de 35 ans IQ [30,05- 41] elles étaient toutes infectées par la VIH 1. Le taux médian de CD4 récent était de 335,65 IQ [170,50- 384,66]. La prévalence des lésions précancéreuses du col utérin sur la base de l'examen anatomopathologique dans notre étude était de 27% IC95%[24,10 ;29,90] ; avec une prédominance des CIN I. Environ 16% des femmes ont estimé que les lésions précancéreuses du col utérin Les déterminants des lésions précancéreuses retrouvés étaient l'immunodépression sévère représenter par un taux de  $CD4 \leq 200$  ( $p=0,002$  ; RP=1,18[1,02 ; 1,34]) et l'absence du traitement au Cotrimoxazole( $p=0,026$  ; RP=1,90 [1,10 ; 2,70]).

**Conclusions and Recommendations:** Ces résultats appellent à un dépistage régulier et systématique des lésions précancéreuses chez les femmes vivant avec le VIH.

## TUPEC170

### **Assisted Partner Notification through Psycho-social Support amongst Adolescents Living with HIV at the Mulago ISS Clinic**

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**Background:** Makerere University Joint AIDS Program runs one of the largest HIV/AIDS paediatrics, adolescent and youth clinic in Africa based at Mulago Hospital, Kampala and over 1000 HIV positive adolescents and youth are undergoing HIV medical care.

Adolescents represent a growing share of people living with HIV worldwide. In 2017 alone, 590000 young people between the ages of 15 to 24 were newly infected with HIV, of whom 250000 were adolescents between the ages of 15 and 19. To compound this, data indicates that only 23% of adolescent girls and 17% of adolescent boys aged 15-19 in Eastern and Southern Africa- the region most affected by HIV have been tested in the last one year (UNICEF 2018, July), this leaves a very big gap in coverage of HIV status awareness, calling for more efficient strategies.

Through psycho-social support strategies on adolescents, many have been able to disclose to their significant others, this in turn has increased the numbers and statistics of HIV testing among adolescents.

**Methods:** Peer Support Group is a learning and support intervention delivered to all children, adolescents and youth aware of their HIV positive. All HIV positive adolescents aged between 10 - 18 yrs and youth 19 yrs and above are consecutively enrolled into the support group once disclosed to about their HIV positive.

Monthly cognitive-behavior sessions for age-specific groups 16-18 and youth Club (19+) are usually held whenever financially possible.

This is to provide knowledge, setting new habits, improve adherence to medications and empower the sexually active adolescents to disclose to their significant others.

Main activities include peer education through a didactic approach, reading, writing and creative drawing, singing, dance drama and games. Using a team of committed facilitators, health workers, attached to each age-group.

**Results:** Through the peer support groups 17/50 eligible clients were interviewed (6 m and 11 f), 31 clients were elicited (5 m and 26 f), 31 clients were notified (5m and 26 f), however 29 of the notified were tested, with only 9 f and no males turning out HIV positive, all the 9 were linked to access HIV care at the mjap clinic,

**Conclusions and Recommendations:** Empowerment from the peer groups attained by adolescents, avails them with the necessary tools to disclose to their significant others, this as a strategy can be used in prevention of secondary infections, usually due to non disclosure and poor adherence.



## TUPEC171

### **Sharp STIs Rise among MSM PrEP Users in Kiambu County, Kenya: A Retrospective Cohort Study**

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**Background:** Mambo leo Peers Empowerment Group (MPEG) is an MSM led organization established in 2010 .It was legally registered in 2014 and engages members through advocating for Human Rights, promoting sexual reproductive health, referrals for security interventions, psycho-social and economic empowerment of MSM and LGBTI community at large. Currently the organization has funding from Global Fund HIV Grant through Kenya Red Cross to offer comprehensive HIV Prevention services targeting 960MSM in Kiambu County. The organization has an additional funding from Jilinde (Bill &Melinda Gates Foundation) project that promotes PrEP demand creation and initiation ensuring 80% continuation.

**Methods:** This was a review of the program data based on the cohort maintained in the program. Upon enrollment of the clients into the program, the clients were offered with HIV Testing Services, condom and lubricants, behavioral intervention including health education as well as PrEP as comprehensive HIV prevention among the MSM community.Data was collected on Monthly basis and review done after every 3 months to analyze the number of clients that have accessed HIV prevention services

**Results:** MPEG through this project contacted 901 MSM in 2018 of which 411 accessed HIV testing, 395 tested negative,16 were newly diagnosed with HIV and 411 screened for STIs, 25 were diagnosed and treated with different STIs and out the number that was diagnosed with STI, 15 were found to be on PrEP. New STI cases from quarter 1, 2, 3 and 4 were 0, 8, 2 and 6 respectively. The total STI cases treated from quarter 1,2,3, and 4 were 0, 2,12 and 11 respectively. During this period there were 8 new cases of HIV identified in quarter 2 and 2 cases identified in Quarter 3.

**Conclusions:**Increased STI infection could be attributed to unprotected sex among the young MSM initiated on PrEP. There is a need to strengthen sensitization on STI transmission, prevention and treatment to all the peers especially those eligible for PrEP. Ensure quarterly STI screening of all the peers to identify new cases and initiate treatment to curb against spread of the STI which is a predisposing factor to HIV infection.

**Recommendations:** PrEP must be used with Condom for it to achieve the optimal results. Young MSM on PrEP should be screened for STIs on a quarterly basis. There is need for Continuous Medical Education to the service providers to ensure they are appropriately sensitized on STI screening.

## TUPEC172

### **Non-medical Use of Prescription Drugs Predicts Sexual Risk Behaviour and Sexually Transmitted Infections among Youths in the Buea Health District, Southwest Region, Cameroon**

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**Background:** The non-medical use of prescription drugs (NMUPD) and sexually transmitted infections (STIs) are serious public health concerns in young people all over the world. Apart from the direct harmful effects, NMUPD is associated with sexual risk behaviour that predisposes youths to HIV/STIs. However, this has received very little attention in Cameroon.

**Methods:** A community-based, cross-sectional study was conducted in the Buea Health District (BHD) from January to June 2018, targeting youths aged 15 - 29 years. Participants were interviewed using a pretested semi-structured questionnaires and screened for HIV, syphilis, hepatitis B and C. Chi-square and logistic regression analyses were performed on SPSS version 24 at 5% significance level.

**Results:** Of the 464 participants enrolled (median age: 21 years, IQR: 18 - 24 years), 63% were females. Ninety (19.6%) of the participants acknowledged misusing prescription medication in the past 12 months. The prevalence of HBV, HCV, HIV and syphilis were 10.6%, 3.2%, 1.5% and 1.1% respectively. Alcohol consumption before sex ( $p < 0.001$ ) and keeping multiple sexual partners ( $P < 0.001$ ) were common among youths who misuse prescription medications. Young adults (20-24 years) (aOR = 4.09), smoking (aOR = 3.56), use of illicit substances (aOR = 3.33) and NMUPD (aOR = 2.23) were associated with at least one reactive test results.

**Conclusion and Recommendation:** This study provide baseline evidence of the magnitude of NMUPD and its associated STIs risk among youths in the BHD. These findings could have implications for policies on drug use reduction and prevention of HIV/STIs in Cameroon.

## TUPEC173

### Aspects Épidémiologiques de l'Infection à Papillomavirus Humain chez les Femmes Vivant avec le VIH à l'Hôpital Bon Berger de Tshikaji en RD Congo

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**Background:** Le virus du papillome humain (VPH) est l'une des infections transmissibles sexuellement les plus courantes dans le monde. L'immunosuppression liée au VIH augmente le risque de persistance de l'infection à HPV et donc le risque de progression vers des lésions précancéreuses et cancéreuses du col de l'utérus. Au Congo, à ce jour, aucune étude sur le VPH chez les femmes vivant avec le VIH n'a été réalisée.

**Methods:** Il s'agit d'une étude prospective portant sur 203 patientes réalisée entre janvier 2014 et septembre 2017 au département des maladies infectieuses de l'Hôpital Bon Berger. Toutes les femmes ont bénéficié d'un frottis cervical vaginal avec étude cytologique selon la technique monocouche. La détection et le génotypage de HPV ont été réalisés par PCR nichée en amplifiant un fragment de la région suivi d'un séquençage.

**Results:** L'âge moyen des patients était de  $40,26 \pm 10,14$  ans, le CD4 médian au moment de l'échantillonnage était de 518 / mm<sup>3</sup> et la charge virale moyenne de 82914,28 copies / ml. Une grande majorité de femmes (43%) étaient au stade C de la maladie au moment de l'inclusion (43% contre 32% au stade A et 25% au stade B). L'étude cytologique a montré que 129 femmes (63%) avaient subi un examen cytologique anormal. Dans l'étude virologique, 146 patients (74,5%) sur 195 étaient positifs pour l'ADN du VPH. Le génotypage par séquençage de 39 échantillons a montré que le génotype 58 était le plus fréquent (64%), suivi du génotype 9 (15,4%).

**Conclusions and Recommendations:** Le dépistage systématique des lésions précancéreuses et cancéreuses est un axe stratégique clé des activités nationales de lutte contre le cancer du col utérin. Au travers de ces résultats, il est nécessaire de renforcer les messages de prévention auprès de cette population afin d'éviter la transmission du virus aux partenaires mais aussi de réduire le risque d'évolution des lésions vers des stades plus avancés.

## TUPEC174

### Characterizing the Burden and Factors Associated with Sexually Transmitted Infections among Men who Have Sex with Men in Kigali

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**Background:** Globally, the incidence of sexually transmitted infections (STIs) among men who have sex with men (MSM) has increased recently. In Rwanda, syndromic surveillance remains standard with limited data characterizing STIs burden among MSM. This study evaluated the prevalence and determinants of Syphilis, *Neisseria gonorrhoeae* (NG) and *Chlamydia trachomatis* (CT) in Kigali, Rwanda

**Methods:** A respondent-driven-sampling survey of 737 MSM  $\geq 18$  years was done March-August 2018 including an interviewer-administered questionnaire, HIV testing and STI screening. Syphilis screening used rapid plasma reagin (RPR) test confirmed by Treponema Pallidum hemagglutination assay (TPHA). CT/NG were tested by Cepheid GeneXpert in self-collected urine and rectal swabs. A multivariable Poisson regression with robust variance estimation was used to assess associations of STIs and covariates of interest

**Results:** The mean age was 27.4 years [range: 18-68]. Prevalence of HIV : 10.1% (RDS 95% CI: 6.4-12.1) and of STIs: 19.9% (147). Syphilis: 5.7% (42), CT: 9.1% (67) and NG: 8.8% (65). Syphilis (18% vs 4%,  $\chi^2$  test P: 0.001), NG (15% vs 8%,  $\chi^2$  test P: 0.054) and overall STI burden (31% vs 19%,  $\chi^2$  test P: 0.012) were higher among HIV positive compared to HIV negative MSM. For CT, 67% were genital infections, 27% rectal and 6% both. For NG, 52% were rectal, 29% genital and 19% both. Only 25.8% (23/89) of STI+ MSM who came back for their results had symptoms on their 1<sup>st</sup> or 2<sup>nd</sup> visit

In the multivariable analysis adjusting for HIV status and demographics; greater age - 25-34 yrs : aPR: 1.84 (95% CI: 1.27-2.66) and >35y.o aPR: 1.67 (95% CI: 1.02-2.73) compared to 18-24; having regular male sexual partners in the previous month aPR: 1.61 (95% CI: 1.06-2.46) and STI symptoms in the previous year aPR: 1.54 (95% CI: 1.13-2.09) were positively associated with STI infection. Being circumcised aPR: 0.73 (95% CI: 0.53-1.01) and both buying and getting condoms for free aPR: 0.62 (95% CI: 0.41-0.93) were negatively associated

**Conclusion:** MSM, especially those living with HIV, have a high burden of STIs which constitutes a significant risk of HIV transmission and acquisition among MSM networks and beyond. The high proportion of rectal NG implies high risk sexual behaviors that may be amenable to intervention. The distribution of CT and NG in different anatomical sites, most of which were asymptomatic, highlights the need to shift from syndromic STI management in Rwanda to using highly sensitive lab methods to screen STIs in exposed anatomical sites

## TUPEC175

### Youths Making an Impact in HIV/STI Prevention in Humanitarian Settings in the South West Region of Cameroon

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**Issues:** Aside the high HIV prevalence in the Southwest Region of Cameroon (7.2%) far above national prevalence(4.2%), the ongoing deteriorating humanitarian crisis in the two anglophone Regions (South and North West) of the country continue to fuel the likelihood of new HIV infections. The destruction of community structures and burning of houses and schools has left over 300.000 persons including students to be internally and externally displaced and the further targeting and kidnapping of health workers even worsen the situation with more constrains of offering effective services.

Limbe Health District has become a host community to thousands of these internally displaced population(IDPs) and the shutdown of schools, lack of income and an enabling environment for sexual violence, increased drug use all contributes to challenges in offering a comprehensive HIV package.

**Descriptions:** Taking into consideration humanitarian principles, a community peer to peer approach of both displaced youths and youths from host communities was used to reach out to adolescent population with HIV education/testing, targeted street campaigns, Sexually transmitted infections (STIs) education and referrals for testing and communication for behavior change. This project is an extension of a project that started in 2017 targeting non scholarised youths, in this phase, since the project locality was highly concentrated with IDPs and every youth in the community was basically idle, a youth friendly spaces strategy was incorporated in a bit to keep them busy while reaching out to them with HIV/STIs education, testing and treatments. The project is expected to end by December 2020.

**Lessons learned:** Thirty youths(30) both boys and girls were identified and trained to carry out community HIV/STIs sensitization, animate youth friendly spaces and refer cases to selected hospitals or selected nurses meet with the client at their homes. So far, a total of 3800 youths has been reached both during youth friendly spaces and during campaigns with HIV/STI education and HIV testing of which 15(9 girls/6 boys) were positive and they were all referred and placed on treatment, 218 had asymptomatic signs of a sexually transmitted infection.

**Next steps:** Capacity building of these youths to get involve in active search for lost cases, gender based violence cases and index tracing will be incorporated in future.

## TUPEC176

### **Risk Profiling During STI Services: A Strategy to Improving HIV-positive Yield among Men who Have Sex with Men in Nigeria**

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**Background:** Men who have sex with men (MSM) are highly affected by HIV in Nigeria with a prevalence rate of 22.9%. Individuals with sexually transmitted infections (STIs) are more likely to contract and transmit HIV. Thus, risk profiling as part of STI services is a strategy to identify HIV-positive MSM and link them to treatment.

**Methods:** The integrated most at-risk populations HIV intervention prevention program (IMHIPP) provided STI syndromic management for MSM in Akwa-Ibom, Benue, Cross River, FCT, Lagos, Nasarawa and Rivers states of Nigeria. Between October 2017 and March 2019, beneficiaries who were screened for STIs also completed the risk assessment and all received HIV testing services (HTS). Quantitative data was collected using the national HIV testing intake forms. Beneficiaries could score < 1, 0, or +1, the latter signifying high risk. We used the online tool <http://vassarstats.net/odds2x2.html> to perform a two-tailed chi square test with the Yates correction to determine if the difference in HIV prevalence between beneficiaries with an assessment score of +1 (higher risk) and those who did not was statistically significant at the P=0.05 level.

**Results:** In total, 10,948 beneficiaries were screened for STI during the period and completed the risk assessment form. Of these, 6% (694) MSM had a risk assessment score of +1 with a total of 698 cases: 3% (20) scrotal swelling; 3% (19) lower abdominal pain; 28% (230) anal warts, 23% (160) genital ulcers; and 39% (269) urethral discharge, 0.57% MSM presented more than one STI cases. In total, 100% (694) of these high-risk MSM were tested with a yield of 26% (180). Furthermore, MSM with low risk assessment had a yield of 6% (615). MSM with a high risk had significantly higher odds of testing positive for HIV than those with a low risk score (OR 2.754 CI: 2.097-2.761, ChiSq 150.49 P< 0.001).

**Conclusions and Recommendations:** Findings show a high positive yield can be achieved through targeted HIV testing such as STI risk profiling MSM. Economically, this will reduce the high rate of consumption of HIV test kits, focus attention towards identifying MSM Living with HIV and controlling the epidemic within the group.

## TUPEC177

### **Ampleur des Infections Sexuellement Transmissibles chez les Femmes Infectées par le VIH et Hospitalisées dans un Service de Maladies Infectieuses au Mali**

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**Background:** La prévalence des infections sexuellement transmissibles (IST) au Mali, basée sur des enquêtes est estimée à 19%. Les IST sont une porte d'entrée au VIH, et contribuent à entretenir sa transmission. Le service de Maladies Infectieuses (SMI) du CHU du point G, accueille les patients majoritairement positifs à l'infection à VIH. Le constat est que, les femmes qui y sont hospitalisées pour une affection quelconque, ont des signes et/ou symptômes faisant évoquer une IST.

**Methods:** Nous avons mené une étude rétrospective, en exploitant les données contenues dans les dossiers de patientes VIH + présentant des signes et/ou symptômes en faveur d'une IST, de la période de Janvier 2016 à Juin 2018 (163 dossiers). L'objectif était de déterminer le profil épidémiologique, clinique et biologique des IST chez ces femmes VIH+ qui avaient été hospitalisées pour une autre affection.

**Results:** L'âge des patientes était compris entre 16 et 60 ans, avec une moyenne de 36,3 +/- 8 ans. Les femmes mariées représentaient 53,3%. Parmi elles, 73,5% avaient au moins 2 coépouses. Les principaux motifs d'hospitalisation étaient la toux chronique (62%), fièvre au long cours (21%). Sur le plan immunovirologique, la charge virale n'était pas toujours disponible, et 68% avaient un taux de CD4 inférieur à 100 Cellules/mm<sup>3</sup>.

La prévalence des IST était de 39%. Parmi elles, 67,2% étaient des écoulements, 26,7% des ulcérations, 6,1% des Condylomes.

Les leucorrhées étaient blanchâtres dans 53,5% de cas, verdâtres (18 %) et jaunâtres (16,9%).

Quant aux ulcérations, dans 62,2% de cas, elles étaient à contours réguliers, à fond propre, et douloureuses. Elles étaient toutes précédées par des vésicules qui s'étaient rompues spontanément.

*Candida albicans* (43%) *Gardenerella vaginalis* (28%) et *Trichomonas vaginalis* (13%) étaient les germes les plus retrouvés dans les IST d'écoulement après prélèvement vaginal.

**Conclusions and Recommendations:** Les IST chez les femmes infectées par le VIH, hospitalisées au SMI du CHU du point G sont fréquentes. Elles sont dominées par les écoulements et ulcérations. Il convient de rechercher et de traiter systématiquement les IST, quelque soit le motif d'admission. La prise en charge des coépouses et époux reste encore un défi.

## TUPEC178

### Prévalence du VIH et des IST chez les HSH au Sénégal : Enquête de Surveillance Combinée de 2017

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Au Sénégal, la prévalence du VIH, bien que faible, reflète une épidémie de type concentré chez les populations clé notamment les hommes ayant des rapports sexuels avec les hommes (HSH). Cette étude avait pour objectif d'évaluer la prévalence du VIH et des IST chez les HSH ainsi que les facteurs comportementaux associés à cette épidémie

**Méthodes:** Il s'agissait d'une enquête de surveillance combinée faite à l'échelle nationale. Les HSH recrutés selon la méthode « boule de neige » ont été inclus à la suite d'un consentement libre et éclairé. Un questionnaire socio-démographique incluant le comportement sexuel a été administré. Des prélèvements de sang veineux ont été réalisés pour le diagnostic sérologique du VIH, VHB, syphilis et HSV-2, et la recherche moléculaire de *Chlamydia trachomatis* (CT) et *Neisseria gonorrhoeae* (NG) a été faite à partir de prélèvements d'urines. La sérologie a été réalisée avec les tests Architect HIV Ag/Ab Combo<sup>®</sup>, Architect HBs Qualitative II<sup>®</sup>, Architect Syphilis TP<sup>®</sup>; tous les échantillons réactifs pour le VIH ont fait l'objet de confirmation selon un algorithme à 3 tests.

**Résultats:** Au total 1148 HSH ont été enrôlés dans 12 régions du Sénégal. L'âge moyen des participants était de 24,5 ± 6,1. La population était essentiellement constituée de célibataires (90,9%). Parmi les HSH, 882 individus (76,8%) étaient bisexuels tandis que 266 d'entre eux (23,2%) étaient homosexuels. Au terme des tests sérologiques, 317 individus étaient infectés par le VIH soit une prévalence de 27,6%. Les autres IST avaient été détectées avec des séroprévalences respectives de 15,9%, 15,1% et 4,4% pour l'hépatite virale B, l'infection à HSV2 et la syphilis et des prévalences respectives de 4,9% et 2,3% pour CT et NG. La prévalence de la coïnfection VIH+VHB était de 4,8%, celle de VIH+HSV2 de 6,9%. La prévalence du VIH était 2,8 fois plus élevée à Dakar (49,6% vs 17,8%) ; elle était significativement associée à l'âge (45,2% chez les plus de 25 ans vs 19,4%), au statut homosexuel (37,7% vs 24,1%) et l'usage de drogues par voie intraveineuse (63,2% vs 27,2%).

**Conclusions et Recommandations:** Ces résultats montrent une prévalence élevée chez cette tranche de population. Cette population étant constituée essentiellement de bisexuel peut entraîner une propagation rapide des IST au Sénégal.



## TUPEC179

### **Knowledge, Attitudes and Practices about Sexually Transmitted Infections (HIV INCLUDED) in Patients in Mahalapye, Mochudi and Molepolole, Botswana**

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**Background:** Correlation between HIV transmission and sexually transmitted infections (STIs) has long been established. STIs increases risk of one acquiring HIV infection. Botswana has a high prevalence of HIV (17.5%) and a rising number of sexually transmitted infections. Data regarding practices, attitudes and knowledge is scarce in Botswana. With such knowledge, decision and policy makers will be empowered to design relevant policies, allocate resources and influence communities to be responsible for their health. We aimed to determine the knowledge, attitudes and practices of clients in healthcare facilities in Botswana about STIs.

**Methods:** This was a cross sectional study in the primary health care clinics in 3 large villages. We administered a structured questionnaire to clients who attended the clinics.

**Results:** *Knowledge;* HIV was the most known infection for males and females at 90.2% followed by gonorrhoea (68.6%) and syphilis (72.5%). The least known were hepatitis B (7.8%) and Chlamydia (16.5%). The known mode of transmission was sexual (94.1%) while other modes were 37.6% for blood transfusion, 48.2% for sharing needles and 5.9% for deep kissing. Discharge (85.5%) was the known symptom followed by itching (62.4%). When asked on who they perceive to be at risk for acquiring STI's, 71.4% and 70.2% thought those with multiple partners and those who frequently change their partners were most at risk respectively. Condom usage was at 92.9% followed by faithfulness at 61.6% when looking at knowledge on prevention methods.

**Attitude and practices:** Majority of participants have previously had 3-5 and >5 sexual partners at 31% each, with females having more sexual partners. Only 16.5% of the participants had had one sexual partner. 86.3% of the participants currently had one partner and 0.8% had more than 5 partners. 65.9% of the participants always used a condom with a casual partner, however 5.9% did not use a condom and 18.4% sometimes used it with a casual partner. 53% of married couples always used condoms.

**Conclusions and Recommendations:** The study showed that there was fair knowledge about STIs and modes of transmission. Knowledge of symptoms and signs was limited. There was a difference between where men and women acquired information on STI's and knowledge on risk group that calls for targeted interventions. Respondents' attitude and practices towards sexually transmitted diseases did not match their knowledge of prevention methods.

## TUPEC180

### Wide Seroreactivity Spectrum of Systemic and Genital IgG Against HPV in Non-vaccinated HIV-infected and Uninfected African Women Living in France

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**Background:** Women no more eligible for Human Papillomavirus (HPV) vaccination are at high risk for cervical cancer, particularly HIV-infected African women. We evaluate the seroreactivity of both systemic and mucosal IgG from African women living in France and carrying genital high-risk (HR)-HPV infection.

**Methods:** Serum and cervicovaginal secretions (CVS) were obtained from 23 African women (mean age, 44.3 years), 73.9% HIV-infected and 26.1% uninfected, and positive for genital HR-HPV. Serum and CVS were tested by HPV L1-Virus-like particle (VLP)-based ELISA to assess the IgG seroreactivity of each paired serum and CVS against HPV from alpha-7 (HPV-18, -45 and -68) and alpha-9 (HPV-16, -31 and -33) groups.

**Results:** Vaginal IgG seroreactivity of women was low. Of the 16 women with monotypic HPV infection, only half were seropositive for the HPV causing the infection. Of the 7 women infected with several HPV types, 71.4% had a genital IgG specific to at least one HPV types detected by PCR. A high rate of alpha-9 intra-group cross-reactivity was observed. Indeed, 65.2% of women harbored vaginal IgG against more than 3 alpha-9 HPV at time, while this rate was 5 times lower within the alpha-7 group. In addition, 69.5% of women exhibited inter alpha-7 and alpha-9 cross-reactivity. Remarkably, all women, exhibited serum IgG highly reactive against all the 9 HPV types. Furthermore, although these women exhibited serum IgG against the HPV types detected by PCR, in most of cases the highest IgG reactivities were directed against other HPV types. HPV from alpha-9 group were found to induce higher IgG reactivities than those from alpha-7 group. Finally, when comparing the IgG reactivity for each HPV between the systemic and vaginal compartments, we found that serum IgG were at least 5 times more reactive than vaginal IgG ( $P < 0.001$ , for the 9 HPV).

**Conclusions and recommendations:** Study women genitally infected by HR-HPV showed high serum IgG seroreactivity and moderate vaginal seroreactivity against a wide spectrum of alpha-7 and -9 HPV types. These results suggest that the development of natural protection has occurred against the most prevalent HR-HPV, mostly in the systemic compartment but not in the genital tract of these women. These observations rise the interest to design a new HPV vaccine with a genital administration route to optimize the existing vaginal humoral response against HPV and protect women no more eligible for prophylactic vaccination by Gardasil.

## TUPEC181

### Slower Sputum Smear Conversion in HIV-infected Tuberculosis Patients Compared to HIV Negative in Bamako, Mali

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**Background:** The prevalence of HIV is 1.1% in the general population of Mali but rose to 14% in TB patients. There are limited data to predict the appropriate time frame on smear conversion in HIV co-infected patients with initial sputum smear under effective first line TB regimen. The goal of our study was to determine the rate of smear conversion between HIV positive and negative TB patients using classical staining microscopy in Bamako.

**Methods:** We conducted a prospective cohort study from 2015 to 2018. Adults with smear positive pulmonary TB (PTB) naive to treatment were consecutively enrolled in an IRB approved protocol in five health centers in Bamako. HIV status was determined using rapid diagnosis Test, followed by Elisa and confirmed by Western Blot. Confirmed PTB patients were monitored and sputum collection at M1, M2 and M5 to assess smear conversion with fluorescent Auramine Rhodamine. MTBc isolates were also spoligotyped for lineage classification. Epi info 7 analyses were conducted to determine the rate of smear conversion between HIV positive and negative TB patients.

**Results:** A total of 946 TB patients were included. The prevalence of HIV was 9.41%. MTB Lineage 4 (Euro American) and Lineage 5/6 (*M. africanum*) represented 63.32% and 27.48% respectively. Overall, the conversion rate in HIV negative patients was 43% compared to HIV positive patients RR: 1.43 (CI: 1.05 - 1.96)  $p=0.02$ . Specifically after 1M of treatment the conversion rate by AR was higher in HIV negative 25.90% (5.77% in *M. africanum* and 18.21% for Euro American) than HIV positive (24.69%) (6.17% for *M. africanum* and 17.28% for Euro American). Furthermore, treatment failure rate (non-conversion at 5M) was higher in patients infected with *M. africanum* (24%) than Euro American (17.40%).

**Conclusions and Recommendations:** Our data show a higher smear conversion rate in HIV negative than HIV positive patients. This slow conversion rate in HIV-infected patients may explain the high death rate among this group.

## TUPEC182

### **Pulmonary Tuberculosis among HIV+ Prisoners with Symptoms of Respiratory Infections at Yaounde Central Prison Nkondengui**

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**Background:** Despite the test and treat strategy, opportunistic diseases always exist in prison due to poor living conditions and promiscuity. This study was to highlight the prevalence a bs determinant of pulmonary tuberculosis with a positive microcopy among prisoners living with HIV suffering from respiratory infections atYaounde central prison Nkondengui.

**Methodology:** A cross-sectional study was carried out from November 2017 to June 2018 at Yaounde central prison Nkondengui targeting HIV positive prisoners with clinical syndrome of respiratory infections. After authorization of the director of the prison, an information notice was administered to the eligible patients, who then provided their informed consent prior to enrollment into the study. A structured questionnaire was filled and sputum microscopy smear performed for Acid fast bacilli test. A chi square test was done and  $p < 0.05$ , the difference was statistically significance.

**Results:** Out of 107 HIV positive prisoners showing symptoms of respiratory infections, 95% of men, the mean age was  $32.9 \pm 0.8$  years (min: 20; max:70). The rate of positive pulmonary tuberculosis in this study was 5.9% (6/107) with a female predominance (16.7%vs.4.6%men,  $p=0.82$ ). The highest frequency of pulmonary TB were found in patients aged more than 60 years (33.3%), in uneducated (25%) and in those with more than 180 months in prison (16.7%). Participants having previous contact with tuberculous seemed to be more infected (83.3%vs.16.7%,  $p=0.35$ ). in addition, no link has been found between awareness of TB, level of education of prisoner and the frequency of TB observed in this study (( $p=0.92$  and  $p=0.97$  respectively).

**Conclusion and Recommendations:** We should keep doing the systematical screening of acid fast bacilli among HIV positive prisoners with clinical syndrome of pulmonary infection. A wide sensitization on preventive measures should be done and confirmed cases should be isolated rapidly.

**Keywords:** prevalence, determinant, pulmonary tuberculosis, HIV/AIDS, respiratory infections, Nkondengui

## TUPEC183

### Genomic Diversity and Transmission Dynamics of *M. tuberculosis* in Africa: A Systematic Review and Meta-analysis

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**Background:** *Mycobacterium tuberculosis* complex (MTBC) and its human host are the most competent organisms having co-evolutionary theory. This review determined the phylogeography, genotype related clinical phenotype, and transmission dynamics of MTBC in Africa.

**Methods:** Spoligotyping and Mycobacterial Interspersed Repetitive Units-Variable Number Tandem Repeats (MIRU-VNTR) based articles from Africa published in English language were included. Articles were retrieved from PubMed and Scopus on 12 May 2018.

**Results:** A total of 15,152 TB cases across 20 African countries were obtained. The majority (91%) were PTB, 81 % were naïve to TB drugs, 77.7% were males and the TB/HIV co-infection rate was 28.3%. The period of data collection dated back from 1997 to 2015 (19 years). In Africa, 92% and 7% of tuberculosis (TB) was caused by *M. tuberculosis* (Mtb) and *M. africanum* (Maf), respectively. Among Mtb lineages (L), L4 was the predominant 67%, followed by L3/Central Asian (CAS) 10%. L7/ETH1 and L5/6/Maf were restricted to the horn and western Africa, respectively. L4.6/SIT37, H37Rv like, L4.1.2/Haarlem and H3-Ural were proportionally more frequent among tuberculous lymphadenitis (TBLN) than among pulmonary tuberculosis (PTB) cases. Based on MIRU-VNTR 24 loci, clustering rate was gauged at 31% and the secondary case rate from a single primary case was 20%.

**Conclusion and Recommendations:** Africa in general, and the east-west pole of Africa in particular harbored genetically diverse population of MTBC with characteristics of geographic segregation. Both generalist and specialist genotypes circulated in the region. The L4 is dominant across the continent while *M. bovis* is rarely detected as a cause for human TB. The clinical significance of MTBC genetic diversity in the different geography and population groups of Africa is not fully understood. Both person to person transmission and reactivation mode of TB disease are significant in Africa. Thus, prevention and control strategy should envisage these two scenarios.

## TUPEC184

### **Incidence Rates for Tuberculosis among HIV-infected Patients in Northern Tanzania**

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**Background:** HIV and TB are leading infectious diseases, with a high risk of co-infection. Worldwide, 2-3 billion people have latent TB, resulting in 1.3 million deaths in 2016. People living with HIV (PLHIV), have a 20 times greater risk of developing TB than the general population. This study determined the predictors and TB incidences among HIV positive patients after a follow up period of 6 years since enrolment at Care and Treatment Centres (CTCs) in the Northern part of Tanzania.

**Methods:** We used routinely collected data from 489 Care and Treatment Clinics (CTC) in three regions in northern Tanzania, where all PLHIV were screened for TB, and those positive on screening given a sputum-test for TB infection. All PLHIV attending CTC between January 2010 to December 2017 were included in the analysis, with TB incidence defined as sputum-positive cases over person years of follow-up. Poisson regression with multilevel component was used to compare the TB incidence between sub-groups of PLHIV.

**Results:** Among 87,489 PLHIV 405 of patients developed TB in 199296 person-years of follow-up, giving an overall TB incidence rate of 2.03 per 1000 person-years. Compared to CD4 counts of less than 350 cells/ul, higher CD4 count was associated with lower TB incidence, 70% lower for CD4 count of 350-500 cells/ul (HR 0.29, 95% CI 0.09-0.97) and 80% lower for those with CD4 count above 500 cells/ul (HR 0.21, 95% CI 0.06-0.74, p-value 0.014) Independently, those who were taking anti-retroviral therapy (ART) had lower TB incidences (HR 0.21, 95% CI 0.07-0.65).

**Conclusions and Recommendations:** Among HIV positive patients attending CTC, low CD4 counts and not taking ART treatment are associated with higher TB incidence, highlighting the need to get PLHIV on treatment early, and to maintain their treatment. Data from routinely collected and available health services can be used to provide evidence of epidemiological risk of TB.

## TUPEC185

### **Improving TB Preventive Treatment Coverage and Completion in Sierra Leone: Quality Improvement Methods Enhanced Site-level Processes but Uncovered Above-site Procurement and Stock Management Barriers**

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**Background:** In Sierra Leone, 25% of HIV-related deaths are attributed to TB. Although the Ministry of Health and Sanitation (MoHS) recommends the use of TB preventive treatment (TPT), TPT coverage and completion rates are low. In response, ICAP at Columbia University and the U.S. Centers for Disease Control and Prevention partnered with MoHS to pilot the use of quality improvement (QI) methodology to enhance the coverage of isoniazid (INH) preventive therapy (IPT) amongst PLWH at 14 health facilities (HF).

**Methods:** In November 2017, 14 HF were supported to launch a QI Collaborative (QIC) to improve IPT coverage. QICs are organized multi-HF projects, in which QI teams at each HF use the same targets and indicators, develop and test contextually-appropriate interventions and convene quarterly to share results. HF aimed to improve IPT coverage from a baseline of 4% to 70% within 12 months. Teams also tracked INH stock outs. At a baseline 5-day training, QI teams conducted root cause analyses and designed and prioritized HF-specific change ideas. Each HF team received supportive supervision from ICAP and MOHS and used QI methods to assess the impact of each idea. At quarterly meetings QI teams presented their progress and exchanged best practices.

**Results:** 14 HF participated throughout the QIC. The ICAP team made 263 supportive supervision visits to review implementation and document change ideas, which included provider education, adjustments to work flow and documentation processes, improved patient engagement and demand creation activities and enhanced site-level INH stock management. In the initial 6 months, aggregate IPT coverage at the 14 HF rose from a baseline of 4% to a peak of 47% and IPT completion rates rose from 48% to a peak of 82%. After month 6, both initiation and completion rates fell sharply due to stock outs of INH, and by month 10, rates were similar to those at baseline. While INH stocks lasted, 9/14 (64%) of HF reached the 70% coverage target.

**Conclusions and Recommendations:** The use of QI methods enabled HF teams to identify, test and share successful change ideas. These site-level interventions improved IPT coverage and completion rates amongst PLWH. However, the improvements uncovered substantial above-site level challenges with INH procurement and stock management. Attention to above-site IPT supply is needed to keep pace with site-level interventions to improve IPT coverage.

## TUPEC186

### Geospatial Clustering and Modelling Provide Policy Guidance to Distribute Funding for Active TB Case Finding in Ethiopia

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**Background:** Tuberculosis (TB) exhibits considerable spatial heterogeneity, occurring in clusters that may act as hubs of community transmission. We evaluated the impact of an intervention targeting spatial TB hotspots in a rural region of Ethiopia.

**Methods:** To evaluate the impact of targeted active case finding (ACF), we used a spatially structured mathematical model that has previously been described. From model equilibrium, we simulated the impact of a hotspot-targeted strategy (HTS) on TB incidence ten years from intervention commencement and the associated cost-effectiveness. HTS was also compared with an untargeted strategy (UTS). We used logistic cost-coverage analysis to estimate cost-effectiveness of interventions.

**Results:** At a community screening coverage level of 95% in a hotspot region, which corresponds to screening 20% of the total population, HTS would reduce overall TB incidence by 52% compared with baseline. For UTS to achieve an equivalent effect, it would be necessary to screen more than 80% of the total population. In a scenario in which, case detection rate (CDR) is increased to 75% in each strategy (from the baseline level of 65% in hotspots and 60% in non-hotspots), the cost per averted case of active TB was estimated at USD 800 for HTS and USD 2,700 for UTS. Compared with hotspot targeting, the UTS approach would avert 24 new TB cases at an additional total cost of USD162,200, which translates to an incremental cost-effectiveness ratio of USD 6700 for each additional case averted. Where regional TB program spending was capped at current levels, the intervention impact increased with increasing budget allocation to hotspots. Increased regional spending was associated with further incidence reductions, with maximum gains seen when an increased regional budget (five times higher than currently available) was shared between hotspots and non-hotspot regions in the ratio of 60% to 40%.

**Conclusions:** Our analysis suggests that a spatially-targeted strategy is efficient and cost-effective, with the potential for a significant reduction in overall TB burden.



## TUPEC187

### **Drug Resistant Tuberculosis Patients Co-Infected with HIV Management: Health Workers' Attitude, Perception and Barriers**

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**Background:** Attitude and behavior of health workers has direct influence on the health seeking behavior of DR-TB co-infected with HIV patient's clinical management. Attitudinal problem, in health sector has further endangered lives of patients and makes the management difficult especially in Sub-Saharan Africa.

**Methods:** This qualitative research assessed the perceptions and attitudes of health workers in the management of patients with DR-TB co-infected with HIV in Nigeria using Ondo State as a case study. Purposive sampling method was used to assess the opinion of health workers in both public and private health care centers in the study area. Data was collected through semi-structured interviews for 3 months. Focus group discussion method was used in assessing barriers and limitation. This was achieved by the use of Two Hundred questionnaires. Health worker's attitude assessment was done using dichotomization of the four-point-likert scale questions. Barriers to management of this co-infection was done using open ended questions. Demography and Socio-economic were also assessed. SPSS statistical software was used for analysis.

**Results:** From the research, lack of basic facilities, inadequate health personnel are the major barriers to the effective management of this disease. From the analysis, health workers affirmed that patient's emotional imbalance affects treatment outcome. 68.4% of respondent averred injectable drugs constitute major constraint for patient during management. The perception of healthcare workers as regard mode of transmission of tuberculosis in DR-TB patients living with HIV is worrisome, as 62.9% of the respondent displayed ignorance of the mode of transmission. Therefore, a massive orientation of healthcare workers on DRTB is essential.

**Conclusion:** The outcome of the research will aid health policy maker and health professional on the need for training and re-training of health workers in Africa towards the effective management of this illness now and in the foreseeable future in line with Sustainable Development Goals (SDG). It is recommended that public should encourage health workers instead of criticizing their efforts during management.

**Keywords:** HIV, Drug Resistant Tuberculosis, Co-infection, Health services, Health workers

## TUPEC188

**Factors Predicting Mortality among Patients Newly-diagnosed with Tuberculosis, Kisumu, Kenya**  
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**Background:** Globally, Tuberculosis (TB) is among the leading cause of death, ranked tenth in 2018. Kenya has a large TB disease burden with a prevalence of 558 cases per 100,000 and mortality of 37 cases per 100,000. Kisumu county, ranked 3<sup>rd</sup> highest HIV burden in the country, has a concurrent high TB prevalence of 500-600 cases per 100,000 and TB/HIV confection rate of 63%. There is need to explore TB treatment outcomes to identify risk factors associated with mortality. ICAP is supporting the TB/HIV program at Jaramogi Oginga Odinga Teaching and Referral Hospital (JOOTRH) in Kisumu, with funds from PEPFAR through the US Centers for Disease Control and Prevention (CDC), to enhance TB case identification and treatment.

**Methods:** A retrospective data analysis was conducted using routine program TB aggregate reports for patients started on TB treatment between April 2015 and March 2018. Data elements summarised in the TB aggregate report included TB treatment outcomes (cured, treatment complete, died and lost to follow up) by age, gender and type of TB. Descriptive statistics were used to summarise data elements in the report. Risk factors associated with death were assessed using a logistic regression model and results presented using Odd Ratios (OR) and Confidence Intervals (CI).

**Results:** A total of 283 patients were initiated on TB treatment; 179 (63%) were male, the median age was 34 years ([IQR]: 28-42 years), 244 (86%) had pulmonary TB and 149 (52%) were TB/HIV co-infected. The overall treatment success rate was 241 (85%); cured 163 (58%) completed treatment 78 (28%), died 25 (9%) and 17 (6%) were lost to follow up. Of the 25 patients who died, 15 (60%) were male, the median age was 38 years [(IQR: 35-43), 22 (88%) had pulmonary TB and 19 (76%) TB/HIV co-infected. Death was significantly higher among those aged 35+ years (OR 3.7, [CI: 1.45 to 9.71]), and among HIV-positive patients (OR: 3.1, [CI: 1.21 to 8.06]). Gender and type of TB did not significantly predict mortality.

**Conclusions and Recommendations:** Our findings highlight significantly increased risk of death in older TB patients and among TB/HIV co-infected patients. There is need for continued intensified case finding among PLHV and routine TB symptoms screening among older patients presenting in hospital settings, regardless of the HIV status, to improve identification and minimise mortality due to TB.

## TUPEC189

### Utilization of Xpert MTB/RIF for Tuberculosis Diagnosis in People Living with Human Immunodeficiency Virus(HIV) from a Rural Setting: Case of Gatsibo District Health Facilities, Rwanda

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**Background:** Tuberculosis remains the leading cause of death in people living with Human Immunodeficiency Virus (PLHIV) globally. In 2017, Tuberculosis caused an estimated 300,000 deaths from TB among patients with HIV positive. In the same year, 10million of people developed TB of which 9% were people living with Human Immunodeficiency Virus among them 72% from sub-Saharan countries. Although Rwanda has made progress in the implementation of TB/HIV collaborative activities which are impressive, a rapid and accurate diagnosis is imperative for the reduction of tuberculosis (TB) among PLHIV. This study was aimed to assess the utilization of a novel test, Xpert MTB/RIF in the diagnosis of TB among HIV infected patients in Gatsibo District Health Facilities.

**Methods:** A cross-sectional study was conducted between January and December 2018 at Kiziguro district hospital and eleven rural health centers situated in Gatsibo District, Eastern province. Presumptive tuberculosis cases identified among people living with Human Immunodeficiency Virus and patients who attending TB department with 4 symptom-based screening tool and eligible as risk group during their clinical routine visits were enrolled for TB diagnostic assessment. The specimens collected were sent to the hospital Laboratory for Xpert MTB/RIF sensitivity and specificity test. Patient data were extracted from TB laboratory registers gathering demographic data, immunodeficiency and tuberculosis status. Descriptive statistics were performed to analyze key outcomes. Data were entered, cleaned, edited and analyzed using SPSS Version 16.0 statistical software package.

**Results:** Over twelve months 1222 cases were diagnosed Tuberculosis among them 588(48.1%) were males while 634 (51.9%) females. People living with Human Immunodeficiency Virus constituted 32(2.6%) of all presumptive tuberculosis cases diagnosed using Xpert MTB/RIF. There was male preponderance with the female at a ratio of 1.372 to 0.993. Mean age of patients was  $52.31 \pm 25.951$  years; 24(1.97%) of total cases screened were confirmed TB positive among which 14(58%) male and 10(42%) female. Mycobacterium tuberculosis was detected in 5(15%) of the HIV infected patients and no case of rifampin resistant was identified.

**Conclusions and Recommendations:** Utilization of the aforementioned novel test to diagnose Mycobacterium tuberculosis in HIV infected patient is likely of immense benefit for rapid diagnosis of tuberculosis and reduction of multidrug resistance as well. Low and middle-income countries are encouraged to implement the Xpert MTB/RIF assay to minimize the risk of Multidrug resistance of tuberculosis in Human Immunodeficiency Virus care and scale up treatment settings.

## TUPEC190

### **Malaria Parasite and Hematological Abnormalities in HIV Seropositive and HIV Seronegative Individuals Attending the Regional Hospital Limbe, South-West Region, Cameroon**

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**Background:** Malaria and the Human Immunodeficiency Virus (HIV) infection constitute public health problems in Cameroon including in the South West Region. This study determined the prevalence of malaria parasite and hematological abnormalities in HIV positive patients in Limbe, Cameroon.

**Methods:** A structured questionnaire was administered to record socio-demographic data. Three hundred and nine (309) HIV positive patients were examined clinically and venous blood collected for malaria parasite detection, HIV infection diagnosis and full blood count analysis. One hundred and two (102) HIV negative individuals were recruited as the control.

**Results:** The study population consisted of 299 (72.7%) females and 112 (27.3%) males distributed in 5 different age groups. Overall, malaria parasite prevalence was 14.1% (58). This prevalence was significantly higher ( $P < 0.001$ ) in HIV negative control group (33.3%, 34) when compared to HIV positive patients (7.8%, 24). Among HIV positive participants, malaria parasite prevalence was significantly higher in female patients ( $P = 0.003$ ), febrile patients ( $P < 0.001$ ), anemic patients ( $P = 0.015$ ) and in patients who were not on antiretroviral treatment (ART) ( $P = 0.03$ ) when compared with their respective counterparts. Among HIV negative group, though not significant, malaria parasite prevalence was higher in female, febrile and anemic patients when compared with their respective counterparts. Overall anemia prevalence was 52.1% and was significantly higher ( $P = 0.004$ ) in HIV positive patients (56%, 173) than in HIV negative participants (40.2%, 41). Plasmodium/HIV co-infected patients had significantly lower red blood cell count ( $P < 0.001$ ) and hemoglobin ( $P = 0.02$ ) as well as significantly higher mean corpuscular hemoglobin ( $P < 0.001$ ) and mean corpuscular hemoglobin concentration ( $P = 0.001$ ) when compared with malaria parasite infected patients.

**Conclusions and Recommendations:** Majority of the HIV patients are under treatment and are given health talks; these have helped them to be more conscious and led to a significant reduction in malaria parasite prevalence. But anemia remains a major problem. This information will help policy makers to better manage these patients which are still a great concern in our society. The government of Cameroon should continue implementing control measures against malaria and make available antiretroviral treatment to these vulnerable HIV patients.

## TUPEC191

### Factors Associated with Asymptomatic Malaria among People Living with HIV Following Discontinuation of Cotrimoxazole Prophylaxis at Kitgum Hospital, Northern Uganda

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**Background:** The effect of discontinuation of cotrimoxazole (CTX) prophylaxis on asymptomatic malaria in patients on antiretroviral therapy (ART) who have achieved viral load suppression and living in a malaria endemic area remains unknown. We determined the prevalence and factors associated with asymptomatic malaria among people living with HIV following discontinuation of CTX preventive therapy at the Kitgum hospital HIV clinic.

**Methods:** This was a cross sectional study conducted between March and April 2019 at the Kitgum hospital HIV clinic. We consecutively enrolled 599 participants aged 18 years and above and living with HIV attending the clinic. A pre-tested questionnaire was administered to the participants, and a standardized physical exam was conducted. All participants provided a finger-prick thick blood smear which was stained with Giemsa and used to assess for the presence of malaria parasites. Factors associated with asymptomatic malaria among those who had been discontinued on CTX were assessed using binary logistic regression.

**Results:** Of the 599 participants enrolled, 452 (75.5%) had stopped CTX prophylaxis for at least 3 months. The overall prevalence of malaria was 4.5% (95% confidence interval [CI] 3.0% - 6.5%). There was a significant difference in malaria prevalence among those who had stopped CTX (5.5% [95% CI 3.6% - 8.1%]) compared to those on CTX prophylaxis (1.4% [95% CI 0.17 - 4.83],  $p=0.038$ ). Factors associated with malaria parasitaemia included increasing duration following the discontinuation of prophylaxis (adjusted odds ratio [aOR] 1.79, 95%CI 1.225 - 2.621), CD4 count greater than 250 cells/ul (aOR 0.17, 95%CI 0.071 - 0.426) and bed net use the night prior to survey (aOR 0.31, 95%CI 0.105 - 0.906) were found to be significantly associated with malaria.

**Conclusions and Recommendations:** People living with HIV who had stopped CTX prophylaxis for at least 3 months had a significantly higher prevalence of malaria compared to those on prophylaxis. Increased duration was associated with increasing odds of having parasites while IRS, bed-net use and high CD4 count were associated with reduced odds of having malaria parasites. These results suggest that malaria preventive methods including IRS and bed-net use should be promoted in HIV positive patients in whom CTX prophylaxis is being discontinued so that they are protected from malaria.

## TUPEC192

### Prevalence and Risk Factors of Malaria in HIV-Infected Pregnant Women on Anti-retroviral Therapy in Enugu, South East Nigeria

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**Background:** Malaria and HIV co-infection significantly increase the burden of these diseases in pregnancy, yet the interactions of these diseases in pregnant women are not well understood. The aim of the study was to determine the prevalence and examine the factors that could be associated with malaria in HIV infected pregnant women on antiretroviral therapy

**Methods:** Blood samples were collected from 301 confirmed HIV positive pregnant women in various trimesters and examined for malaria parasite presence and density with other laboratory indices. Baseline socio-demographic information, antenatal information, CD4 levels, and viral load were collected from clinical records. Information on type of treatment, such as intermittent malaria preventive treatment (IPT) and ART therapy/ prophylaxis, was extracted from care cards. Information on the prior use of antimalarial drugs and cotrimoxazole intake was obtained from direct interviews.

**Results:** The prevalence of malaria among HIV-positive pregnant women was 49.83% and the odds of having malaria doubled with living in a rural community (AOR 2.04, CI [1.07-3.91]  $P < 0.001$ ). Also, being on ART therapy increased the odds of having malaria by 133% (AOR 2.33 CI [1.06-5.10]  $P < 0.05$ ). A higher level of CD4 counts reduced the odds of malaria parasitaemia though not significant. Those whose CD4 count was 200-350 and  $>350$  had reduced odds of malaria parasitaemia (AOR 0.50, CI [0.81-1.44]  $P=0.202$ ) and (AOR 0.65, CI [0.24-1.73]  $P=0.391$ ), respectively, compared with those with lower CD4 counts. Malaria parasites were unlikely in those with normal haemoglobin levels (AOR 0.08 CI [0.04-0.16]  $P < 0.001$ ). Pregnant women who were not on treatment before coming to the hospital ANC were about nine times more likely to have malaria parasites than those who had it recently (AOR 9.30, CI [4.44-19.50]  $P < 0.001$ ).

**Conclusions and Recommendations:** The prevalence of malaria in HIV-positive pregnant women was influenced by the locality, level of haemoglobin and self-medication prior to coming to the hospital. Low haemoglobin, which serves as an index of malnutrition, was also a serious factor that should be evaluated to reduce the scourge and burden of malaria. Programs geared towards provision of mosquito and environmental barriers should be improved.

**Keywords:** Rural HIV, ART, CD4, Enugu, Nigeria

## TUPEC193

### **A Prospective Cross-sectional Community Based Study on the Prevalence of Hepatitis B Infection and Associated Factors in Jimma Town. Oromia Region, Ethiopia 2017**

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**Background:** Viral hepatitis is a major public health problem throughout the world affecting several hundreds of millions of people. It is estimated that about 2 billion people are infected with hepatitis B virus (HBV) worldwide; of which more than 350 million have chronic HBV, and 1. 2 million die from chronic hepatitis, cirrhosis and hepatocellular carcinoma.

**Methods:** To determine prevalence and risk factors of hepatitis B virus infection among adults living in Jimma town, a cross-sectional study was conducted from October, 2016 to October, 2017, in a total of 95 adult's age 15-45 years, in Jimma town. Whole blood was collected with heparinized tube and rapid test was done for hepatitis B virus surface antigen (HBsAg) and human immunodeficiency virus (HIV) 1 & 2. A pre-structured questionnaire was used to collect socio-demographic data and to find out possible risk factors.

**Results:** The overall prevalence of HBsAg was 4.2 % and HIV 3.2%. The vaccination coverage for HBV was very poor with only one individual vaccinated fully. The study showed that high proportion of HBsAg positivity was among men with four times higher than female (p value- 0.039) and having family history of liver disease showing higher **chance of HBsAg positivity by seven folds (p-0.029)**.

**Conclusions and Recommendations:** The prevalence of HBV and HIV was high and there was poor vaccination coverage for HBV. Creating a channel of communication to increase awareness on HBV and provision of care and treatment as well increasing the vaccination coverage should be given emphasis.

## TUPEC194

### Seroprevalence of the Coinfection HBV, HCV, HIV among Clinic Attender at Laquintinie Hospital, Douala, Cameroon

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**Background:** In Cameroon, the new national AIDS control strategy test and treat apart from lymphocytes TCD4 rate to achieve 90-90-90 target impose a systematic screening and the early management of HIV. However, HIV, HBV, and HCV share the same routes of transmissions increasing the risk of co-infection and of severe damage. This study was undertaken to evaluate the prevalence of the co-infection HIV/HBV/HCV among subjects aged from 15-75 years at Laquintinie Hospital, Douala, Cameroon.

**Methodology:** A cross-sectional, prospective study was held from October, 2017 to March 2018 at Laquintinie Hospital. HIV, HBV and HCV immunochromatographic test were performed to each ignorant participants and HIV positives cases were confirmed by oral Quick as recommended by the National AIDS control Committee in 2016. Data analysis were performed using Epi info 7.0. P value < 0.05 was considered as statistically significant.

**Results:** Out of 247 patients enrolled, there were 51.52% of women and the mean age among participants was 42.3( 1.98 years [min : 15; max : 75]). The seroprevalence of HIV was 10.12% (25/247), HBV 7.69 % (13/247), and HCV 4.04 % (10/247). The co-infection HIV/HBV was 1.21% (3/247), HIV/HCV (2.02%) and HBV/HCV (1.61%). Women seemed to be most affected by HIV infection (12.5% vs.7.5% men, p=0.28) and co-infection HIV/HBV (1.5%vs.0.8%, p=0.9), HIV/HCV (2.3%vs.1.6%, p=0.9) whereas male subjects by HCV (5.0% vs. 3.1% women, p=0.65), HBV (10.0%vs. 5.4%, p=0.89) and the co-infection HBV/HCV (2.5% Vs. 0.8%, p=0.56). Subjects aged (45; 60) were more likely to be positives either by HIV 23.6%(9/38), HBV 12.1%(5/38), HCV 7.8% (3/38) or by co-infection HIV/HBV 7.8% (3/38), HIV/HCV 7.8% (3/38).

**Conclusions:** We should keep intensifying sensitization on prevention measures against HIV, HBV, HCV in the town of Douala-Cameroon.

Keywords : Seroprevalence, co-infection, HIV, HBV, HCV,



## TUPEC195

### Hepatitis B Infection and Risk Factors among Children Living with HIV in Cameroon: Towards an Integrated Management at Essos Health Centre in the City of Yaoundé

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**Background:** In Cameroon, the high endemicity of hepatitis B virus (HBV) prompts the systematic vaccination of new born babies. With the considerable burden of HIV/HBV co-infection in pregnant women, monitoring HVB among HIV positive children would guide on the need for HIV/HBV integrated long term pediatric management. Thus, we sought to ascertain the determinant of HBV among children living with HIV (CLHIV) and performances of rapid diagnosis tests currently used.

**Methodology:** A cross-sectional study was conducted in February-June 2017 among CLHIV under 18 years old at the Essos Hospital Center, Yaounde, Cameroon. ELISA sandwich (HBsAg EIA test kit-Rapid Lab) was done on each duplicated samples and the mean density of each sample was calculated for positivity against the required threshold.  $p < 0.05$  was considered significant. In addition, the performances of 2 Rapids diagnosis tests (Diaspot vs. HBV-5) were evaluated in comparison with ELISA (Gold standard).

**Results:** A total of 83 CLHIV were enrolled (54.2% female, mean age 8.7years, 48.2% aged [10-15 years]). HBV prevalence among CLHIV was 2.41% (2/83). The 2 cases of HBV-positivity were aged 11 and 15 years, with neither history of anti-HBV vaccination nor anti-HBV-serum, had not been bathed with an antiseptic-solution at birth as recommended. However, all of them were experienced breastfed. Maternal exposition to tenofovir-lamivudine-efavirenz (TENLAM-E) during pregnancy provided a better protection against HBV than other regimens: 1.5% AgHBs positive[1/64] TENLAM-E versus 7.69% [1/13] other regimens). As far as the diagnosis side concerns, the sensibility of Diaspot test was 100% (2/2) vs. 50% (1/2) for HBV-5. The specificity of Diaspot test was 100% (45/45) vs. 97,8% (44/45) for HBV-5. The predictives positives and negatives values of Diaspot were respectively 100%(2/2) and 100% (45/45) and HVB-5 were 50%(1/2) and 97,8% (44/45).

**Conclusions:** Beyond the standard anti-HBV immunization program for all children in the Cameroonian context, community-based HBV preventive measures among CLHIV should be focused on ensuring the knowledge of HBV status by each pregnant woman. For each HBV-positive mother without access to adequate prophylaxis, cesarian section should be prioritized. And In low and income setting, the test Diaspot with a better reliability than HBV-5 could be used for the rapid diagnosis of HBV.

**Keywords:** HBV infection, risk factors, children living with HIV/AIDS

## TUPEC196

### Evaluation of Hepatic Fibrosis in Patients Co-infected with HIV and Hepatitis C in Yaounde, Cameroon

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**Background:** HIV infection exacerbates the prognosis of HCV infection, with a faster progression of hepatitis. Hepatic fibrosis is the major disruption of the hepatic tissue architecture characterized by anarchic deposition and excess of the extracellular matrix. The aim of this study was to evaluate hepatic fibrosis in HIV patients co-infected with HCV compared to mono-infected HCV patients and to identify associated risk factors.

**Methods:** A total of 97 participants (mean age  $60.2 \pm 14.3$  years and 0.76 male/female sex ratio) was enrolled in a study conducted in Yaounde, Cameroon from November 2018 to January 2019. Liver fibrosis was assessed by the APRI score (AST/Platelet Ratio Index) which identifies the stage of fibrosis classified by the Metavir system (F0 to F4). The CD4 counts and the HIV viral load of HIV/HCV co-infected individuals were also determined to establish the correlation between hepatic fibrosis and immunovirological status. Statistical analysis were done using Microsoft Excel 2016 and Epilnfo7 software. A significant value was considered at  $P < 0.05$ .

**Results:** A high proportion (63.6%) of HIV/HCV co-infected participants had an abnormal AST level:  $73.6 \pm 45.8$  IU/L compared to  $58.5 \pm 39.3$  IU/L (59.3%) among HCV mono-infected participants. The frequency of thrombocytopenia was 63.6% with a mean platelet count of  $137 \pm 50 \times 10^3$  IU/L in HIV/HCV co-infected patients compared to  $176 \pm 67 \times 10^3$  IU/L in mono-infected patients (38.4%). The progression of hepatic fibrosis in participants with clinically significant fibrosis: F2, F3 and F4 was high among HIV/HCV co-infected (63.6%) and the mean APRI score was  $1.7 \pm 1.4$  versus  $1 \pm 0.8$  among HCV mono-infected (26.7%). The frequency of participants with clinically significant fibrosis was higher among men (47.6%) than among women (38.2%). All participants (100%) with detectable HIV viral load had clinically significant fibrosis compared to 33.4% with undetectable HIV viral load. 42.9% patients with  $CD4 > 500$  cells/ $\mu$ L had clinically significant fibrosis while 100% of patients with  $CD4 < 200$  cells/ $\mu$ L had clinically significant fibrosis.

**Conclusions and Recommendations:** A high level of AST combined with thrombocytopenia (APRI score  $> 1.5$ ) is an indicator of hepatic fibrosis in HIV/HCV co-infected individuals. Because of its non-invasive and less costly nature, the APRI score can be used as a biological marker for monitoring HIV/HCV co-infected individuals.

## TUPEC197

### Mass Campaigns for HIV, HBV (HBsAg) and HCV Testing in Cameroon Using Mobile Units and Triplex Rapid Diagnostic Test

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**Background:** Chronically infected individuals by HIV, HBV or HCV are at-risk of spreading their infections and developing AIDS-related illnesses and viral hepatitis-associated liver cirrhosis and cancer. HIV, HBV and HCV testing is fundamental for both prevention and treatment services. We herein report our experience using mobile units and Triplex rapid diagnostic test (RDT) during several free screening campaigns in health districts of urban and rural cities of Cameroon. The Triplex HIV/HCV/HBsAg (Biosynex, Strasbourg, France) consists in manually performed, visually interpreted, immunochromatographic RDT simultaneously detecting in 15 minutes HIV- and HCV- specific antibodies (Ab) and HBV surface antigen (HBsAg) in serum, plasma and whole blood (venipuncture and fingerstick).

**Methods:** From February to April 2018, 1,206 volunteers (665 men, 541 females; mean age 31,9 years and range, 18-91) were enrolled. Blood samples were collected after informed consent and submitted to parallel screening by Triplex HIV/HCV/HBsAg (Biosynex) and CE-labeled ELISAs for HIV, HBV (HBsAg) and HCV (Human Diagnostics, Germany), as reference assays. Volunteers were screened and their results given back to them. Administrative and ethical approval were obtained.

**Results:** Out of these 1,206 volunteers screened, 104 (8.6%) were positive for HBsAg, 25 (2.1 %) for HIV and 27 (2.2%) for HCV. All samples positive and negative by Triplex RDT were further confirmed by reference HIV, HBV and HCV ELISAs, demonstrating 100% sensitivity and specificity, as well as excellent concordance between Triplex RDT and ELISAs (Cohen's kappa =1). Only one blood sample was positive for both HIV and HBsAg. All volunteers who were seropositive by Triplex RDT for HIV, HBV or HCV were referred to counselling and treatment centers. There was in our series no lost to follow-up in the transition to reference health care centers, demonstrating that a potential benefit of Triplex RDT results is the ability to immediately establish continuum of care.

**Conclusion and Recommendations:** In populations at high-risk of chronic viral infections such as people living in sub-Saharan Africa, the simultaneous use of low cost Triplex HIV, HBV and HCV RDT in combination with mobile units may clearly improve the "cascade of screening", the prevention strategies and the linkage-to-care with reduced cost and also contribute to achieve the United Nations 90-90-90 targets.

**Keywords:** Triplex, HIV, HBV, HCV testing, Cameroon

## TUPEC198

### Prevalence of Hepatitis B and C among Inmates in Rwanda

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**Background:** The viral hepatitis is a major public health challenge that requires an urgent global public health response. Understanding the prevalence of hepatitis B (HBV) and hepatitis C (HCV) in most at risk populations is critical for better global and national responses. We conducted this study to determine the prevalence of hepatitis B antigens and hepatitis C antibodies among inmates in Rwanda.

**Methods:** This study used data from a nationwide HBV and HCV screening campaign organized by the Rwanda Biomedical Centre in collaboration with Rwanda Correction Services in main prisons across the country from June to October 2017. During the campaign, information on socio-demographic and blood samples were collected by trained nurses; HBV and HCV screening was performed with HBsAg and HCVab using enzyme-linked immunosorbent assays (ELISA) testing. Bivariate and multivariate logistic regressions were used through SPSS version 20.0.

**Results:** Among 51,717 individuals screened for HBV during the campaign, the male were 48018 (91.4%) and the majority was in age category of 25-34 years old (19.7%); overall 2,304 (4.4%) had a positive HBsAg. The highest prevalence (5.4%) was found in the population aged 25-34 [OR] = 1.7, 95% CI (1.4-2.1). The highest HBV prevalence was found in Kigali city (7.3%) Odds Ratio [OR] = 1.9, 95% Confidence Interval [CI] (1.6-2.2) compared to others provinces. About 51,958 individuals were screened for HCVab; among them 3,317 (6.4%) were HCVab positive. Anti-HCV prevalence varied by age with the oldest age group 65+years significantly higher prevalence of 21.2%, OR = 7.9, 95% CI (6.6-9.4) compared to 3.1% OR = 1.2, 95% CI (1.0-1.5) for those under 35 years. Anti-HCV prevalence was higher in female 8.4% vs. 6.2% in male. HCV Prevalence varied geographically where the highest (8.1%) was found in South province OR =1.7, 95% CI (1.4-2.1) and the lowest prevalence in Nord province 3.6% OR=1.1(0.8-1.4).

**Conclusion:** The results show that HBV and HCV infection is a burden in inmates compared to general population. Variations were observed related to: age, geography, gender. National Hepatitis program should continue to target this group among other high risk groups.

**Keywords:** Prevalence, Hepatitis B, Hepatitis C, Inmates, Rwanda

## TUPEC199

### Prevalence of HIV/Hepatitis B Virus Co-infection among HIV Patients Attending Care and Treatment Clinics in a Tertiary Facility, Zanzibar

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**Background:** Hepatitis B Virus (HBV) is the most prevalent viral infection and the leading cause of chronic liver disease globally. Being estimated with HBV prevalence at 6.1%, Africa is amongst the worst infected region in the world. Several serological studies have estimated the prevalence of HBV to range between 2-8% in Zanzibar. In the country, rates of HBV infection have been reported to be lowest in pregnant women (1.2%) and relatively high among most at risk populations (People Who Inject Drugs (PWIDs) - 6.5%, Men who have Sex with Men (MSM) - 4.6% and Female Sex Workers (FSWs) -5.1%). HBV/HIV co-infection poses high risk of HBV disease progression and potential perinatal transmissions. However, there has been limited information on the prevalence of HBV among HIV infected population in Zanzibar.

**Methods:** This analysis used data from HIV patients attending Care and Treatment Clinics (CTC) at Mnazi Mmoja tertiary hospital from June 2012 to February 2016, Zanzibar. Consented HIV patients were asked to provide a specimen for urinalysis and blood for HIV RNA and HBV DNA; thereafter screened for HBsAg if were anti-HBc positive. HBV prevalence was calculated for the full four-years combined and compared by patients' characteristics.

**Results:** A total of 2,561 HIV positive clients were enrolled. Of them, more than half were on ART (55.8%) and 54.0% were on WHO stage III. A total of 1,170 out of 2,561 clients tested negative Anti-HBc test (45.7%), hence were considered susceptible. Among those who tested positive, 1,385 were tested for HBsAg. Of them, 94 (6.7%) were positive. Among the HIV/HBV co-infected clients, more than half (54.5%) tested positive HBeAg test. Significantly high prevalence was observed among male clients (5%,  $p=0.02$ ) and those in WHO stage IV (7.1%,  $p=0.02$ ). The positivity rate was observed to be twice as higher among clients who were not on HAART (76.7%,  $p=0.001$ ) compared to those on HAART.

**Conclusions and Recommendations:** The HBV infection among HIV infected person is higher than that in the general population, varying with sex, WHO staging and HAART status. These data show a paramount importance of conducting routing screening for HBV for HIV infected person and provide appropriate interventions depending on the HBV status. Moreover, there is a need to scale up the HBV services across all facilities in the country for better and early management to reduce morbidity and mortality due to HBV.

## TUPEC200

### Faisabilité de la Vaccination à la Naissance chez les Nouveau-nés de Mères Infectées par le Virus de l'Hépatite B, dans la Cohorte CI ANRS 12359 à Ouagadougou au Burkina Faso

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**Background:** Au Burkina Faso, le vaccin contre l'hépatite B est proposé à 2 mois de vie dans le cadre le programme élargi de vaccination (pentavalent) sans stratégie généralisée de vaccination à la naissance. L'étude ANRS 12359 avait pour objectif d'évaluer la faisabilité de la vaccination à la naissance dans le cadre d'une étude pilote mise en place au CHU Yalgado Ouédraogo de vaccination à la naissance des enfants nés de mères porteuses de l'AgHBs.

**Methods:** L'étude prospective, monocentrique a été menée de Septembre 2014 à Septembre 2017 au Centre Hospitalier Universitaire Yalgado Ouédraogo (CHU-YO). Aux femmes enceintes testées positives pour l'AgHBs, il a été proposé de réaliser, une vaccination contre l'hépatite B dans les 24 premières heures de vie de leurs nouveau-nés en complément des 3 doses du programme élargi de vaccination (PEV). Les caractéristiques sociodémographiques et médicales associées, d'une part à la réalisation de la vaccination à la naissance, et d'autre part à l'administration effective des 3 doses vaccinales (PEV) ont été explorées par la réalisation de régressions logistiques.

**Results:** Au total 600 femmes enceintes infectées par l'hépatite B ont été invités à participer à cette stratégie vaccinale. L'âge moyen des mères était de 27 ans [16-42]. Les scolarisées étaient les plus nombreuses 69,3% (n=416). Les co-infections avec le VIH et le VHC représentaient respectivement 1,16% et 1%. Durant la période de l'étude nous avons enregistré 582 naissances vivantes (97%), 2% (n=12) de morts nés/fausses couches. Le poids moyen était de 3 000g [1700-4600]. La vaccination à la naissance dans les 24 premières heures de vie a été réalisée pour 58,3% des nouveau-nés (n=350) et les 3 doses du PEV pour 98% d'entre eux (n=588). La vaccination à la naissance était associée au niveau de scolarisation des mères (OR= 2,4 [1.26, 4.52]; p value = 0,008) et au dépistage des conjoints pour le VHB (OR= 0,51 [0.27, 0.96]; p value < 0,038). La vaccination par les 3 doses du programme élargi de vaccination était associée à l'âge des mères (OR= 1,3 [1.01, 1.67] ; p value < 0,038).

**Conclusions and Recommendations:** Au cours de cette étude nous avons atteint des taux de couverture pour la vaccination à la naissance et les 3 vaccins du programme élargi de vaccination respectivement de 58,3% et de 98%. Cependant d'énormes défis, notamment logistiques et financiers demeurent pour l'application de cette stratégie à l'échelle nationale.

## TUPEC202

### Seroprevalence du VIH, Hepatites B et C et Syphilis Chez les Donneurs Benevoles de Sang au Centre National de Transfusion Sanguine (CNTS)/Banguien RCA de 2017-2018

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**Introduction:** La transmission des agents infectieux comme le virus de l'Immunodéficience Humain (VIH), l'hépatite B (HBS), l'hépatite C (HCV) et le Treponema pallidum représente la plus grande menace pour la sécurité transfusionnelle du receveur.

Le but du présent travail est de déterminer la séroprévalence de ses quatre (4) marqueurs viraux chez les donateurs bénévoles de sang en à Bangui en RCA en vue de contribuer à l'amélioration de la sécurité transfusionnelle.

**Méthodes:** Il s'agit d'une étude rétrospective descriptive de 2017-2018 au Centre National de Transfusion Sanguine. La population d'étude était constituée de donateurs bénévoles de sang (DBS) de plus de 17 ans et de tout sexe. L'échantillon de l'étude était constitué des donateurs ayant perdu leur qualité en raison de la détection de l'une ou plusieurs de ces pathologies (HIV, AgHBS, HCV, RPR). Les données étaient recueillies à partir des fiches de collectes des données préétablies, des résultats d'analyse, des dossiers des DBS, des registres, des rapports mensuels des activités de la banque de sang.

Les variables de l'étude étaient les données sociodémographiques et les données biologiques. Les données collectées étaient codifiées, saisies, traitées et analysées à l'aide du logiciel Epi info7.2.1.

**Résultats:** Au total, 28343 donateurs étaient enregistrés pour cette étude couvrant la période de 2017-2018. La fréquence du sexe masculin était majoritaire à 89,61%(25399/28343) que du sexe féminin 2944/28343 (10,39%). Les fréquences du sexe féminin infectées par VIH ; HBS ; HCV ; RPR étaient respectivement de: 183/1264 (14,48%), 453/3004 (15,08%) ; 64/407 (15,72) ; 78/515 (15,15). Le sexe masculin était plus représentatif que le sexe féminin.

La tranche d'âge 25-44 ans était la plus infectée par le VIH à 805/1264 (64,68%) suivi de 18-24 ans à 397/1264 (31,40%). Les séroprévalences de HIV, HBS, HCV, RPR étaient respectivement de 1264/28343 (4,46%) ; 3004/28343 (10,60%); 407/28343(1,44%) et 517/28343 (1,82%). La séroprévalence de l'Hépatite B était plus élevée durant la période de l'étude.

**Conclusion:** Cette étude a montré une présence significative des anticorps anti- HIV, HCV, RPR et l'Antigène HBS chez les donateurs Bénévoles de Sang en RCA. Le dépistage systématique ainsi que la sensibilisation des donateurs s'avère important afin de prévenir le VIH/SIDA et les autres IST et garantir la sécurité transfusionnelle.

## TUPEC203

### Pratiques à Risque et Prévalence du VIH, des Hépatites Virales B et C chez les Détenus de la Prison de Bobo-Dioulasso au Burkina Faso

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**Contexte:** Les détenus sont le plus souvent issus des couches sociales défavorisées. Ils sont gardés dans des prisons qui sont de véritables milieux de prolifération de plusieurs pathologies dont les infections virales. Pourtant l'accès à la prévention et aux soins y est limité avec de rares études y relatives.

**Objectifs:** Etudier les pratiques à risques et les prévalences des infections dues au virus de l'immunodéficience humaine (VIH), au virus de l'hépatite virale B (VHB) et au virus de l'hépatite C (VHC) chez les détenus à la maison d'arrêt et de correction de Bobo-Dioulasso (MACB) au Burkina Faso.

**Méthodologie:** Il s'est agi d'une étude transversale, d'août à décembre 2017, qui a porté sur les détenus de la MACB de qui, un consentement éclairé de participation a été obtenu. Après une sensibilisation sur l'étude, nous avons inclus de façon consécutive les détenus qui se sont présentés pour l'enquête. Chez chaque détenu, les informations sociodémographiques et cliniques ont été recueillies à l'aide d'un questionnaire structuré. Aussi, un prélèvement sanguin a été réalisé en vue de la détection des différents marqueurs d'infection que sont les anticorps anti-VIH (Ac anti-VIH), l'antigène HBs (AgHBs) et les anticorps anti-VHC (Ac anti-VHC).

**Résultats:** Au total, 125 détenus ont été inclus dans cette étude. Parmi eux 58,4% étaient des condamnés et 92,8% des hommes soit un *sex-ratio* de 12,9. La moyenne d'âge était de 35 ans ± 11 ans et la tranche d'âges la plus représentée était celle de 25 à 45 ans. Aucun antécédent de VIH, de VHB ou de VHC connu n'a été rapporté. La consommation de drogue injectable n'a pas été rapportée et 14,60% des détenus ont reconnu avoir consommé des substances psychoactives. Les pratiques à risques étaient essentiellement le partage de lames et rasoirs (18,0%), le piercing et les rapports sexuels entre détenus. La proportion des détenus ayant entendu parler d'une existence de rapports sexuels au sein de la MACB était de 44,8%. Les prévalences des infections à VIH, VHB et VHC étaient respectivement de 3,2%, de 9,6% et de 5,6%. Un cas de co-infection VIH-VHC a été diagnostiqué.

**Conclusion:** Les résultats de cette étude ont montré des prévalences du VIH et du VHC plus élevées parmi les détenus qu'en population générale. Cela souligne la nécessité et l'urgence de mettre en place des stratégies pour le contrôle de ces infections dans le cadre du management des populations clés.

**Mots clefs:** VIH, VHB, VHC, prison, Burkina Faso.



## TUPEC204

### **Prévalence de l'Infection à VIH chez les Patients Suivis au Service de Psychiatrie du Centre Hospitalier Universitaire Régional de Ouahigouya**

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**Contexte-objectifs:** Les troubles somatiques sont des troubles fréquemment rencontrés en psychiatrie notamment l'infection par le VIH. Pour une prise en charge globale des patients suivis en psychiatrie, une prise en compte de ces pathologies est nécessaire. Il s'agissait pour nous, d'identifier les différents troubles somatiques comorbides de façon générale et spécifiquement l'infection à VIH chez les patients reçus en consultation et/ou hospitalisés au service de psychiatrie.

**Méthodes:** Nous avons mené une étude rétrospective descriptive portant sur les patients reçus en consultation et/ou hospitalisés durant la période d'étude, entre le 1<sup>er</sup> Janvier 2017 et le 31 décembre 2017 à l'aide d'un questionnaire à partir des registres de consultation, d'hospitalisation et des dossiers des patients.

**Résultats:** Pendant la période d'étude, 4119 patients ont été reçus dont 4103 en consultation et 16 patients ont été hospitalisés. Le sexe masculin était majoritaire (58 %), avec un âge moyen de 33 ans. Le diagnostic de schizophrénie a été noté chez plus de 80 % des patients. Les troubles somatiques ont été notés chez 670 personnes, ce qui donne une prévalence de 16,27 %. Les troubles neurologiques, et les pathologies infectieuses étaient les troubles les plus rencontrés avec des prévalences respectivement de 27,99 et 20,19 %. La prévalence de l'infection à VIH a été estimée à 0,85 %. On note une prédominance de l'infection à VIH1 (62,86 %), suivie du VIH2 (11,43 %) et de la co-infection VIH 1+2 (25,71 %).

**Conclusions et Recommandations:** La prévalence des troubles somatiques est très élevée au service de psychiatrie du Centre Hospitalier Universitaire Régional de Ouahigouya. La prévalence de l'infection à VIH chez les patients reçus durant l'année 2017 a été estimée à 0,85 %, taux qui est très élevé, tenant compte de la prévalence de l'infection à VIH dans la population générale. Cette prévalence élevée des troubles comorbides en psychiatrie, montre la nécessité de créer un cadre pluridisciplinaire de prise en charge des patients dans leur globalité au CHUR de Ouahigouya à travers la psychiatrie de liaison.

## TUPEC205

### Clinical Features of Gastrointestinal Tract Damage in HIV-infected Children

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**Background:** The gastrointestinal tract is one of the key elements of a number of pathological changes in HIV-infection. Gastrointestinal tract damage is one of the central stages of the parthenogenesis of HIV-infection, with symptoms such as childhood backbone and adverse changes in the immune system, leading to an increase in the disease.

**Methods:** The study involved 50 children aged 1 to 18 years who are being treated at the clinic of the Republican AIDS Center. Clinical signs of gastrointestinal disorders in HIV-positive children include 25 (50%) children with oral mucous infection such as appetite reduction in children under 1, pain in the oral mucous, intoxication, pain in the stomach, decreased appetite for children over 5 years, pain in oral mucous, swallowing pain, pain in the epigastric area, appetite decrease, nausea vomiting. The study was conducted based on clinical, virological, immunological, bacteriological, PCR methods.

**Results:** The study showed that angular cheilitis 9 (36%) is characterized by redness and cracking in the corners of the mouth. Oropharyngeal candidiasis lasted more than 2 month in children over 6 month. HIV partner is experiencing the periodic stage of the oral cavity (8%), acute necrotic gingivitis (4%) and necrotic stomatitis (12%). In 3(6%)patients with HIV, oral cavity was detected. In children with HIV infection, recurrent erysleviral stomatitis (2 times per year ) was detected in 17 (68%) children. Candidate esophageal cancer was recorder in 1 (2%) patient. The patient was presented with signs such as pain and anguish behind the pelvis, discomfort when swallowed and difficulty swallowing, which led to anorexia. Gastritis was detected in 3(6%) patients, with nausea, abdominal pain and vomiting in children. In 8 (16%) patients cholecystitis were detected. In the infection of the biliary tract, palpation of the upper abdomen is accompanied by cholestatic changes in pain, diarrhea and functional tests of the liver. 1 (2%) patients with HIV have been diagnosed with lymphoma of the oral cavity. In 2 (4%) patients, Kaposi's sarcoma was detected in the bowel.

**Conclusions and Recommendations:** However, the GI system remains at the center of HIV parthenogenesis, and novel therapeutic strategies addressing ongoing local HIV replication and immune activation are needed. Such steps may be the missing link for HIV-infected persons to achieve complete virological control, and to one day achieve the normal life expectancy that all desire.

## TUPEC206

### An Analysis of HIV and Co-morbidity Profiles for Adults Accessing Health Care in Khayelitsha, South Africa

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**Background:** The success of antiretroviral therapy, and improved quality of life for people living with human immunodeficiency virus (HIV) infection have increased life expectancy in South Africa. As this population ages, more than half of all HIV mortalities are estimated to result from co-infections and non-infectious co-morbidities rather than acquired immune deficiency syndrome (AIDS). This study aimed to explore the HIV prevalence and co-morbidity profiles of patients accessing public health facilities in Khayelitsha.

**Methods:** A longitudinal data set of all adult individuals who accessed public health care in Khayelitsha from January 2016-December 2017, was retrieved from the Western Cape Provincial Health Data Centre. Descriptive and inferential analyses (univariate, bivariate, and multivariate) explored demographics, HIV cases, co-morbidities, and pairwise associations for co-morbidities.

**Results:** Of 181 620 individuals (median age: 37 years, IQR:30-48) seeking health, 131 933 (72.6%) were females and 49 521 (27.4%) were males. HIV was recorded in 88316 individuals of whom 63 016 (71.4 %) were females and 25 219 (28.6%) were males. Males seeking health care were 1.15 times (95% Confidence Interval (CI)=1.11-1.16) more likely to have HIV than females. The median age of HIV ascertainment differed in females 35(30-43) and males 40(34-47),  $P < .001$ . Tuberculosis (31.4%), Hypertension (14%), Mental health conditions (5.3%), Diabetes (4.1%), Cancers (1.81%), and Chronic Kidney Disease (1.7%) were the top 6 co-morbidities identified in the HIV positive individuals with correlations between hypertension and diabetes ( $r=0.24$ ), hypertension and chronic kidney disease ( $r=0.13$ ), diabetes and chronic kidney disease ( $r=0.13$ ); all  $P < .001$ . Whilst co-morbidity clustering varied with age, median ages of ascertainment of co-morbidities were generally younger in HIV positive individuals than HIV negative individuals except for tuberculosis, and significant differences were found between median ages of ascertainment of co-morbidities in females and males with HIV.

**Conclusions and Recommendations:** Though infectious diseases in people living with HIV are declining, non-communicable diseases occurring with HIV have emerged to create a double burden. Further studies of the relationships between co-morbidities are needed to inform comprehensive care approaches and management models.

**Keywords:** HIV, co-morbidities, co-infection, non-communicable

## TUPEC209

### Risk Factors for Stroke Occurrence in a Low HIV Endemic West African Country: A Case-control Study

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**Background:** HIV infection is an emerging vascular risk factor associated with stroke occurrence. The weight of evidence from sub-Saharan Africa in support of this has accrued from countries with high HIV prevalence. Our objective was to assess the contribution of HIV sero-positivity to the occurrence and outcomes of stroke in a West African country with low HIV prevalence.

**Methods:** A case-control study design conducted at a tertiary medical center in Ghana involved in the Stroke Investigative Research & Educational Networks (SIREN) epidemiological study. Stroke cases were adults (aged  $\geq 18$  years) with CT or MRI confirmed stroke and stroke-free controls were age-matched and recruited from communities in the catchment areas of cases. Standard instruments were used to assess vascular and lifestyle factors and serological screening for HIV antibodies was conducted for all study participants. Stroke patients were followed for in-patient mortality outcomes. Associations between HIV, demographic and vascular risk factors and stroke occurrence and outcomes were assessed using logistic regression analysis.

**Results:** We enrolled 540 stroke cases and 540 control subjects with a mean ( $\pm$  SD) age of  $60.8 \pm 15.5$  years (cases) and  $60.0 \pm 15.5$  (controls). Among stroke cases, the frequency of HIV was 12/540 (2.2%, 95% CI: 1.3% - 3.6%) versus 15/540 (2.8%, 95% CI: 1.7% - 4.6%) among stroke-free controls,  $p = .70$ . However, the median (IQR) age of Persons Living with HIV (PLWH) with stroke was significantly lower at 46.5 (40-65.3) years versus 61.0 (50-74) years,  $p = .03$  among HIV- stroke patients. Stroke among PLWHA was predominantly hemorrhagic in 7 out of 12 cases and ischemic in 5 of 12 with notable clustering of established factors such as hypertension, (100%), dyslipidemia, 83.3%, central obesity, 50.0%, diabetes mellitus, 33.3%, cardiac diseases, 8.3% in this group. None of the PLWH with stroke were receiving antiretroviral therapy.

**Conclusions and recommendations:** We found no associations between HIV infection and stroke occurrence among Ghanaians. However a clustering of cardio-metabolic factors in the context of HIV may promote stroke occurrence in younger individuals.

## TUPEC210

### Rates and Drivers of Conversion from Normoglycemia to Prediabetes and Diabetes Mellitus among Antiretroviral-experiencing HIV-infected Patients

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**Background:** Willing to address the substantial gap of knowledge on how people living with HIV and taking antiretroviral therapy (ART) are susceptible to shift from normal glucose tolerance through prediabetes onto overt diabetes mellitus (DM), and the co-factors driving these conversions, the authors conducted this systematic review with meta-analysis to summarize the current evidence on the incidence and risk factors for progression from normoglycaemia to prediabetes and/or DM in ART-exposed HIV-infected people.

**Methods:** EMBASE, PubMed, Web of Science and Global Index Medicus were searched to identify articles published from January 1, 2000 to April 30, 2017. A random-effects model was used to determine a summary estimate of the incidence across studies and heterogeneity was assessed via the  $\chi^2$  test on Cochrane's Q statistic.

**Results:** Overall, 44 studies were included from all World Health Organization (WHO) regions. Studies methodological quality was high with only 10 (30%) medium-quality studies and no low-quality study. There was substantial heterogeneity between studies in estimation of the incidence of diabetes and prediabetes (all  $I^2 > 90\%$ ). The pooled incidence rates of overt DM and prediabetes were 13.7 per 1,000 person-year of follow-up (PYFU) (95%CI: 13-20; 30 studies) among 396,496 PYFU and 125 per 1,000 PYFU (95% CI: 0-123; 3 studies) among 1,532 PYFU, respectively. The respective cumulative incidence estimates were 4.9% (95%CI: 4.0-5.9; 41 studies) and 14.9% (95%CI: 9.1-21.8; 14 studies). The major risk factors for DM and prediabetes were aging, family history of DM, Black or Hispanic origin, overweight/obesity, central obesity, lipodystrophy/lipoatrophy, dyslipidaemia, metabolic syndrome, increased baseline fasting glycaemia, and certain ART regimens like protease inhibitors, zidovudine, lamivudine, didanosine and stavudine.

**Conclusions and Recommendations:** These results are indicative of an important and fast increasing burden of DM and prediabetes among the ART-exposed HIV-infected population. Accordingly, efficient strategies are needed to curtail this high incidence of DM and prediabetes, especially with the ongoing increase in the ART-exposed population following WHO recommendations of initiating ART at HIV infection diagnosis regardless of CD4-count and age.

## TUPEC211

### High Prevalence of Hypertension amongst HIV+ Alcohol Abuser Patients in AHF Supported Sites in Rwanda, a Cross-sectional Study of 835 Participants

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**Introduction:** Hypertension (HTN) is major risk factor of cardiovascular disease among HIV infected patients. Highly active antiretroviral therapy (HAART) has greatly reduced the morbidity and mortality related to HIV/AIDS. Association of hypertension (HTN), alcohol consumption and unemployment amongst HIV positive clients on HAART has been scarcely been investigated in Sub-Saharan Africa. This study aims to investigate the association of alcohol abuse and employment status on the development of Hypertension among HIV infected patients on HAART in Rwanda.

**Method:** A cross-sectional study was conducted at 3 AHF supported sites in Kigali (Kibagabaga District Hospital, Remera and Kinyinya Health centers) between December 2014 and June 2015, involving 835 patients (329 on HIV-positive patients on HAART, 251 HIV-positive patients with HAART-naïve and 255 HIV negative controls). Hypertension was defined as a systolic blood pressure (BP)  $\geq 140$  mmHg and/or diastolic BP  $\geq 90$  mmHg.

**Results:** The prevalence of hypertension was 20% ( $P=0.082$ ) in HAART-naïve patients, 16.4% in patients on HAART and 12.9% in HIV-negative controls. Alcohol consumption of more than three times a week was associated with greater odds of developing arterial hypertension (OR 1.7, 95% CI 1.1-2.8,  $P=0.000$ ). Unemployment was strongly associated with Hypertension amongst HIV+ on ART (OR 2.6, 95% CI 1.2-6.0,  $P=0.021$ ). Age 40 years and above was strongly associated with positive odds of developing arterial hypertension amongst HIV positive people on Highly active antiretroviral therapy respectively 40-49 years old (OR 2.7, 95% CI 1.4-5.2,  $P=0.002$ ) and above 50 years old (OR 4.9, 95% CI 2.4-9.9,  $P=0.000$ ).

**Conclusion:** The prevalence of hypertension amongst aged HIV+ on HAART is elevated for unemployed and alcohol abusers. Policy beliefs and Care and treatment national protocols to monitor HIV related Hypertension amongst unemployed alcohol abusers is recommended.

## TUPEC212

### Association entre le Gène *APOL1* et la Fonction Rénale chez des Personnes Vivant avec le VIH au Burkina Faso

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**Background:** De nombreuses études ont rapporté une association forte entre le génotype à haut risque du gène *APOL1* et plusieurs néphropathies glomérulaires chez les personnes d'origine africaine vivant avec le VIH. La relation entre *APOL1* et le débit de filtration glomérulaire estimé (DFGe) en l'absence de néphropathie diagnostiquée est très peu connue. C'est pourquoi nous nous proposons d'étudier cette relation chez des personnes vivant avec le VIH (PVVIH) à leur admission dans la file active du centre hospitalier universitaire Sourô Sanou (CHUSS) de Bobo-Dioulasso au Burkina Faso

**Methods:** Cette étude transversale a concerné des PVVIH admis à l'hôpital de jour (HDJ) du CHUSS entre janvier 2007 et décembre 2016. Nous avons tiré au sort des patients naïfs de traitement antirétroviral et disposant d'une mesure de la créatinine à leur visite initiale à l'HDJ. Le génotypage du gène *APOL1* a été réalisé à l'aide des dosages TaqMan. Le génotype à haut risque (HR) est défini par le portage de deux allèles à risque (G1/G1, G2/G2 ou G1/G2) et le génotype à bas risque (BR), le portage de zéro ou un allèle à risque (G0/G0, G0/G1 ou G0/G2). Le DFGe a été estimé par la formule du CKD-EPI. L'association entre *APOL1* et le DFGe a été estimée à l'aide d'une régression linéaire multiple

**Results:** Sur 413 patients inclus, 302 (73,1%) étaient des femmes. L'âge médian (intervalle interquartile) était de 37(31-43) ans, le taux médian de CD4, de 202(103-342) cellules/ $\mu$ l, le DFGe médian, de 99(86-112) ml/min/1,73m<sup>2</sup> et la proportion de l'hypertension artérielle (HTA), de 6%. Un seul patient était diabétique et la glycémie médiane était de 4,8(4,4-5,2) mmol/l. La fréquence des allèles G1 et G2 était respectivement de 13,7% et 10,8%. Celle du portage d'un allèle à risque de, 38,3% et deux allèles à risque, de 5,3%. L'augmentation de l'âge était associée à une baisse du DFGe quel que soit le génotype d'*APOL1* et le taux de CD4. Après ajustement sur l'âge, le sexe, l'HTA et la glycémie, le génotype HR était associé à un DFGe plus bas chez les patients avec un taux de CD4 < 200cellules/ $\mu$ l ( $\beta$  = -21,7 ml/min/1,73m<sup>2</sup>, intervalle de confiance à 95% : -35,1 à -8,3 ml/min/1,73m<sup>2</sup>, p=0,002). Chez les patients avec un taux de CD4  $\geq$  200cellules/ $\mu$ l, il n'y avait pas de différence de DFGe selon le génotype de *APOL1* (p=0,478)

**Conclusions :** En l'absence de néphropathie, le génotype HR d'*APOL1* était associé à une fonction rénale diminuée seulement chez les patients présentant une immunodépression sévère

## TUPEC213

### **Association between HIV Status and Depressive Symptoms among Children and Adolescents in the Southern Highlands Zone, Tanzania: A Case-control Study**

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**Background:** Children and adolescents continue to have HIV/AIDS in southern Saharan Africa. Scaling up of HIV services has significantly improved access to ARV and consequently improved on morbidity and mortality related to HIV/AIDS including opportunistic infection. Despite the above efforts, non-communicable conditions including mental disorders such as depression have been observed to contribute to the burden of disabilities about which little is documented. This study, therefore, aimed to determine the magnitude of depressive symptoms and the associated factors among HIV-infected children and adolescents.

**Methods:** The study was a matched case-control design involving 300 cases of HIV-infected children matched by age and sex against 600 uninfected controls. Systematic sampling technique was used to select the cases while multistage sampling technique was employed to identify villages/ streets purposive and sampling technique was employed to obtain participants from households.

**Results:** The overall prevalence of depressive symptoms among the cohort of 900 participants was found to be 12.9%, with 27% of HIV-infected and 5.8% of HIV-uninfected children and adolescents screened positive for depressive symptoms. Multiple logistic regression revealed that being HIV-infected (AOR 1.96(1.11-3.45)), residing in a rural setting (AOR 0.61(0.39-0.96)) and history of childhood deprivation (AOR 4.76 (2.79-8.13)) were significantly associated with depressive symptoms.

**Conclusions and Recommendations:** HIV infected adolescents are more affected by depression compared to non-infected counterparts. Childhood deprivation was significantly associated with presence of depressive symptoms. Integration of mental health evaluation and treatment into the HIV care provided for adolescents can be beneficial. More studies to delineate factors associated with depressed adolescents with HIV may add value to the body of knowledge and overall improvement of care.



## TUPEC214

### VIH et Lymphomes, Difficulté de la Prise en Charge à Madagascar

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**Introduction:** Le risque de développer un lymphome est 200 fois plus élevé au cours de l'infection au virus de l'immuno-déficience humaine (VIH). L'augmentation de l'incidence du VIH dans les pays à faible revenu fait augmenter en parallèle le nombre de lymphome diagnostiqué. Nous avons comme objectif de montrer la difficulté de la prise en charge de l'association VIH-lymphome à Madagascar.

**Méthode:** Nous rapportons cinq cas de personnes vivant avec le VIH (PVVIH) porteuses de lymphome, sur sept ans, de 2012 à 2019.

**Resultats:** Il s'agissait de 4 hommes et d'une femme, âgés respectivement de 42,18, 41, 44 et 52 ans. Tous étaient atteints de l'infection rétrovirale avec des facteurs de risque de l'infection, mais aucun n'avaient d'hépatites virales associées. Le dosage du taux de CD4 a été effectué chez les patients 1 et 3 de 25/mm<sup>3</sup> et 1466/mm<sup>3</sup> respectivement. Quatre patients étaient sous traitement antirétroviral (ARV), le patient 4 avait eu une rupture de traitement. Le type histologique était un lymphome non hodgkinien B diffus mixte pour les quatre, et l'un, un lymphome hodgkinien nodulaire à prédominance lymphocytaire. Les localisations étaient deux cervicales, une sus-claviculaire, un lymphome rénal et une polyadénopathie. Aucun n'avait présenté un envahissement médullaire ni cérébral. Le traitement de 1<sup>ère</sup> ligne en dehors des ARV était la chimiothérapie type Cyclophosphamide Adriblastine Oncovin Prednisolone (CHOP), suivie en 2<sup>e</sup> ligne du rajout de la Bléomycine et arrêt de l'Adriblastine (COPB), puis le Dexaméthasone Adribalstine Aracytine et Cisplatine (DHAP) et enfin du Gemcitabine Oxaliplatine (GemOx). L'évolution était défavorable pour le patient 1 avec un taux de CD4 très bas, avec aggravation dès la 1<sup>ère</sup> cure de chimiothérapie. Le 2<sup>e</sup> patient avait présenté une amélioration puis récidive après 20 cures de chimiothérapie de 1<sup>ère</sup>, 2<sup>e</sup>, 3<sup>e</sup> et 4<sup>e</sup> lignes. Les patients 3 et 4 avaient une évolution favorable sous chimiothérapie, avec régression des adénopathies à la 4<sup>e</sup> cure de CHOP. Le patient 5 débute actuellement sa 1<sup>ère</sup> cure.

**Conclusion:** L'association lymphome et VIH a un pronostic réservé de par son évolution naturelle défavorable mais aussi par les obstacles thérapeutiques liées au coût de la Rituximab à Madagascar, à la non disponibilité fréquentes des autres molécules ainsi que la réticence des patients face aux ARV. Une prise en charge pluridisciplinaire entre l'hématologue, l'oncologue et l'infectiologue est primordiale.

## TUPEC215

### Impact of Cluster of Differentiation (CD4) Count on Viral Respiratory Infection in Children, between 0-5 Years of Age. A Retrospective Study Conducted in Kwazulu-Natal, South Africa

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**Background:** Viral respiratory tract infections (RTI) contribute to hospitalization in children from resource-poor countries. The host cell mediated immunity plays a significant role in disease modification and viral clearance and individuals with defective cell immunity are likely to have frequent and severe episodes of viral RTI. Human Immunodeficiency virus (HIV) infected children are likely to have higher incidence of RTI than HIV negative children.

**Methods:** A retrospective data analysis of respiratory specimens results of children between 0-5 years of age collected between 1st January 2011 and 31st July 2015 from hospitals. Respiratory specimens were tested for viral pathogens using multiplex polymerase chain reaction (PCR) and non-viral pathogens using appropriate culture media. HIV testing was also retrieved from database. The objectives were to analyze respiratory pathogens isolated from specimens of both HIV Positive and HIV negative and to determine the role cd4 plays in RTI.

**Results:** Out of 1264 respiratory specimens, 621 (49.1%) were positive. The age range was from 0 to 60 months with a median age of 3.0 months. Respiratory syncytial virus was the most frequently detected viral pathogen in 218 (35.1%), followed by Adenovirus 151 (24.3%) others were influenza A in 33 (5.3%) and PIV2 was the least common found in only 1 (0.2%) of isolates, while *Klebsiella pneumoniae* 143 (36.3%) and *Staphylococcus aureus* 76 (19.3%) were the leading cause of non-viral RTI. HIV results were available for the 621 (100%) with positive respiratory results with 122 (19.6%) HIV positive and 499 (80.4%) HIV negative. The HIV positive results were classified into those with CD4  $\leq$ 25% and  $\geq$ 25% and there was statistical significant association between HIV infection ( $p = 0.0001$ ) and RTI. There was also found association between those with low CD4  $\leq$ 25% and viral RTI. This indicates that HIV positive individuals or those with low CD4 are more likely to have a RTI.

**Conclusions and Recommendations:** This study identified the common respiratory viral and non-viral pathogens detected among children in KwaZulu-Natal. The study also highlighted the difference in prevalence of viral and non-viral RTI between HIV negative and HIV positive children and it further showed the effect CD4% has on susceptibility to RTI. Upscaling the HIV treatment will likely have an impact on RTI in children. The study outcome has implications for the rational design of public health programs.

## TUPEC216

### Magnitude of Cryptococcal Antigenemia among HIV Infected Patients at a Referral Hospital, Northwest Ethiopia

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**Background:** Cryptococcosis is one of the common opportunistic fungal infections among HIV infected patients living in Sub-Saharan Africa, including Ethiopia. The magnitude of the disease at Felege Hiwot Referral Hospital (FHRH) in particular and in Ethiopia at large is not well explored.

**Methods:** A retrospective document review and analysis was done on records of 137 HIV infected patients who visited FHRH ART clinic from 1 Sep to 30 Dec 2016 and had registered data on their sex, age, CD4 count and cryptococcal antigen screening result. The cryptococcal antigen (CrAg) detection was done by the IMMY CrAg<sup>®</sup> LFA (Cryptococcal Antigen Lateral Flow Assay) kit from patient serum as per the manufacturer's instruction. All data were entered, cleared, and analyzed using SPSS v20. Descriptive data analysis and cross tabulation were done to assess factors associated with cryptococcal antigenemia. Statistical significance was set at p-value less than or equal to 0.05.

**Results:** More than half of the participants, 54.7% (75/137), included in the study were females. The median age of the participants was 32.0 years (ranged: 8-52 years). The mean CD4 count was 51.8 with SD of 26.3 (range 3-98). All the patients were HIV stage IV. The proportion of positive cryptococcal antigen from serum test was at 11.7% (95% CI: 7.3-18.1%). The IMMY CrAg<sup>®</sup> LFA result was found statically associated with patient sex ( $p=0.045$ ). However, it was not associated with patient age group and the CD4 count ( $P>0.05$ ).

**Conclusions:** This study provided baseline data on the magnitude of cryptococcal antigenemia among HIV positive patients that is not touched before in the studied area. The results of the study showed that this opportunistic fungal infection is an important health concern among HIV patients. Further studies with sound design employing adequate sample size should be considered.

**Keywords:** Cryptococcal antigenemia, IMMY CrAg<sup>®</sup> LFA, Bahir Dar, Ethiopia.

## TUPEC217

### **Alarming Prevalence of Cryptosporidiosis among HIV+ Versus HIV-patients with Gastroenteritis Symptoms at Foubot District Hospital, Cameroon**

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**Background:** Cryptosporidiosis is parasitic and neglected infection caused by *Cryptosporidium* parasites. In most healthy people, a cryptosporidium infection produced a bout of watery diarrhea and the infection usually goes away within a week or two. But in case of comprised immune system, infection can become life-threatening without proper treatment. This study was to highlight the prevalence and determinant of cryptosporidium infection among HIV negative and positive living in Foubot, a community area in Cameroon.

**Methodology:** A cross-sectional study was carried out from September 2018 to March 2019 targeting patients at Foubot district hospital with gastroenteritis symptoms. A faeces examination under a microscope after a modified Ziehl Neelson staining was then performed on each study participant. Association between categorical variables was performed by Epi info 7.0 using a X2 test and for  $p < 0.05$ , the difference was considered as statistically significant.

**Résultats et discussion:** 100 participant (50HIV+ et 50HIV-) was enrolled into this study. The mean age was 20.0(1.6 ans (min 1, max 51(. Patients aged [20-30] years were predominant in both groups HIV+ and HIV-. The overall prevalence of cryptosporidiosis was 30% (30/100) with 40%(20/50) HIV+ vs. 20%(10/50) HIV-,  $p=0.029$ , OR=2.7[1.1-6.5(. Women were more likely to be affected (31.03%vs.28.57%,  $p=0.79$ ). Subjects aged [0-10( and [31-40( were more positives (50%,  $p=0.02$ ). All the positives participant had never heard about the disease and were drinking unsuitable water (44.11% vs 0%,  $p=0.000$ ). In addition, the highest prevalence was also found in those living with domestic animals (33.3%vs.25%,  $p=0.37$ ) and those with a low level of education.

**Conclusion and Recommendation:** The prevalence of the cryptosporidium infection in our study was high and as expected, immune compromise subjects were about 3 times most affected. So, make sure to research the parasite cryptosporidium in front of watery diarrhea, especially in immune compromise subjects aged [0-10( and [31-40(. People should be more sensitized on this disease and its preventives measures such as the way of drinking suitable water.

**Keywords:** Cryptosporidium infection, prevalence, risk factors, HIV, gastroenteritis

## TUPEC218

### **Infections Opportunistes chez les Personnes Vivant avec le VIH au Niveau des Centres de Prise en Charge de l'Infection VIH/Sida, Maroc, 2015**

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**Introduction:** La morbidité et la mortalité patients vivant avec le VIH (PVVIH) est due à une immunosuppression entraînant des infections opportunistes potentiellement mortelles pendant le cours naturel de la maladie. En 2015, la prévalence du VIH été faible dans la population générale et concentrée parmi les populations clés. Cette étude visait à estimer la prévalence et les corrélats CD4 des OI chez les PVVIH qui suivi dans les centres référents (CR) au Maroc, en 2015.

**Méthodes:** Nous avons mené une étude transversale chez tous les patients adultes infectés par le VIH, qui avaient acquis des maladies infectieuses admises dans CR en 2015. Le statut d'infection opportuniste des patients a été déterminé par le diagnostic clinique et les investigations en laboratoire. Le nombre de CD4 a été déterminé à l'aide d'une technique de cytométrie en flux. Nous avons recueilli les données sociodémographiques et cliniques à partir des dossiers médicaux des patients. Nous avons effectué une description par les moyens et les pourcentages. L'association a été identifié par les tests appropriée avec un niveau de signification de 0,05 et présenter par mesure de Odds Ratio. L'analyse statistique a été faite en utilisant le logiciel Epi-Info 7.2.0.1.

**Résultats:** 299 cas infectés par le VIH ont été inclus; 53% étaient des hommes. Le groupe d'âge le plus représenté était de 25 à 34 ans (36,1%). L'âge moyen des cas était de  $38,7 \pm 16,8$ . La prévalence des OI était de 47,8%. La tuberculose (65/299, 21,7%), la pneumonie (40/299, 13,4%) et la candidose orale (22/299, 7,4%) étaient les OI les plus fréquemment observées.

**Conclusions et Recommandations:** La tuberculose, la pneumonie et la candidose orale ont été les principales IO, rencontrées par des cas infectés par le VIH. Les mesures préventives et le dépistage précoce du VIH sont cruciaux.

## TUPEC220

### Étude des Troubles Électrolytiques chez les Patients Vivants avec le VIH/SIDA, Hospitalisés au Service des Maladies Infectieuses et Tropicales du CHU du Point G de Bamako

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**Contexte:** Les patients infectés par le VIH, particulièrement ceux au stade avancé peuvent être affectés par diverses maladies opportunistes. Ces maladies et leurs traitements médicamenteux variés les prédisposent à développer différentes sortes de troubles dont les troubles électrolytiques. Ces troubles sont d'autant mortels que les autres maladies opportunistes. D'où cette étude qui a pour objectif d'analyser les troubles électrolytiques chez les patients infectés par le VIH au cours de l'hospitalisation.

**Méthodes:** Il s'agit d'une étude rétrospective, descriptive et analytique menée sur une période de 6 ans allant du 1<sup>er</sup> Janvier 2011 au 31 Décembre 2016. Cette étude a porté sur les patients infectés par le VIH, hospitalisés au service des maladies infectieuses et tropicales du CHU du Point G durant cette période. Cent vingt-six patients séropositifs au VIH ayant réalisés un ionogramme sanguin simple au cours de leur hospitalisation ont été inclus. Une fiche d'enquête préétablie nous a servis de recueil des données à partir des dossiers d'hospitalisation. Microsoft Word et le logiciel SPSS version 21 nous ont servis pour la saisie et l'analyse des données.

**Résultats:** Durant cette étude la moyenne était pour la natrémie de 133,06±12,16 mmol/l, la kaliémie de 3,89±1,15 mmol/l avec des extrêmes respectives de 83,00 et 166,00 mmol/l ; 1,60 et 9,00 mmol/l. Les troubles électrolytiques étaient l'hyponatrémie, l'hypokaliémie, l'hypernatrémie, l'hyperkaliémie et les troubles associés dans respectivement 41,2%, 12,7%, 7,8%, 2,9%, et 35,3% des cas.

Il existe une différence statistiquement significative entre les dysnatrémies et la tuberculose ( $p=0,018$ ) d'une part et son traitement ( $p=0,016$ ) d'autre part.

Une liaison statistiquement significative a été également observé entre les dysnatrémies et la candidose buccale ( $p=0,008$ ) ; la toxoplasmose cérébrale ( $p=0,002$ ) ; la diarrhée ( $p=0,023$ ), l'état nutritionnel du patient ( $p=0,023$ ) ; la prise des antirétroviraux ( $p=0,020$ ). La mortalité était liée au niveau d'immunodépression ( $p=0,012$ ) ; à l'état d'hydratation ( $p=0,010$ ) et à la toxoplasmose cérébrale ( $p=0,007$ ).

**Conclusions et Recommandations:** Les troubles électrolytiques sont fréquents chez les patients infectés par le VIH/SIDA. D'où l'intérêt d'un suivi régulier de l'ionogramme sanguin chez les patients au cours de leur hospitalisation.

**Mots Clés:** VIH, troubles électrolytiques, CHU du Point G, Bamako-Mali.

## **WEPEC094**

### **Skin Manifestations Revealing Human Immunodeficiency Virus Infection in the Department of Dermatology, Antananarivo Madagascar**

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**Background:** Skin manifestation are frequently the first sign of HIV infection and conversion to AIDS and 90% of individuals with HIV/AIDS are diagnosed with skin disease at some point during the course of their disease. Knowledge of the skin and mucosal signs of HIV/AIDS is important, as mucocutaneous lesions are apparent and reveals complications as HIV causes atypical and severe presentations of these conditions. We aim to report the skin manifestations observed in department of dermatology in Antananarivo Madagascar over 18 months period which revealed HIV infection.

**Methods:** Subjects with a positive HIV serology (confirmed by Western blot) that had been revealed by skin disease seen in the department of Dermatology in the University Hospital Joseph Raseta Befelatanana, Antananarivo Madagascar between January 2018 and June 2019 were included.

**Results:** During the period of study, 2457 patients were seen in the department of Dermatology in the University Hospital JRB Antananarivo. Among 208 subjects who had HIV serology, 27 subjects had positive HIV serology with a prevalence of 1,09%. The mean age of patients included was  $35,9 \pm 12,07$  years. The sex ratio was 3,5. Skin manifestations revealing HIV infection were: zoster (n=10), anogenital condyloma (n=5), Kaposi's sarcoma (n=2), pruritic popular eruptions (n=4) and other skin diseases (n=6). Positive predictive values for HIV infection for zona and anogenital condyloma were 65% and 60% in our study, respectively. No case of HIV infection revealed by seborrheic dermatitis, prurigo and molluscum contagiosum was seen. The CD4 count has not yet been analyzed in this study.

**Conclusions and Recommendations:** Knowledge of the skin and mucosal manifestations of HIV/AIDS is important because it ensures early diagnosis and prompt treatment. In our study, patients was seen prior to or with the onset of immunosuppression. Indeed, Kaposi sarcoma can occur prior to the onset of immunosuppression and common disorders with atypical clinical features occur with the onset of immunosuppression. However, molluscum contagiosum appear in the later stages of HIV disease. Zoster and anogenital condyloma had high positive predictive value for HIV infection, in our study.

**Key words:** zoster, anogenital condyloma, immunosuppression

## WEPEC095

### Comorbidites Liees au VIH: Taux Elevee d'Infestation Coccidiose/Amibiase chez les Patients Vivant avec le VIH Souffrant de Gastro-enterites a `l'Ouest-Cameroun

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**Introduction:** La coccidiose et l'amibiase sont des infestations cosmopolites causées par des germes tels que *Cryptosporidium*, *Isospora belli*, *Cyclospora* sp et *Entamoeba*. Il s'agit d'infections opportuniste responsable de diarrhée profuse chez les immunodéprimés et quelques rare fois chez les immunocompétent. Cette étude visait à ressortir la prévalence et les facteurs de risque de ces protozoaires chez les habitants de l'ouest Cameroun vivant avec le VIH+ en consultation à l'hôpital régional de Bafoussam.

**Méthodologie:** Une étude descriptive transversale, a été menée de d'aout à Novembre 2017 à l'hôpital régional de Bafoussam ciblant les patients VIH+ venus consulter pour gastro-entérite après obtention des autorisations éthiques, administratives et le consentement éclairé. L'identification des espèces de protozoaires sur chaque selles a été faite simultanément par un examen direct (eau+lugol) plus technique de concentration de Ritchie (Formol-éther) et par coloration de Ziehl-Neelsen modifiée. Un test de X2 a été effectuée pour les associations entre variables et pour  $p < 0,05$  la différence observée était statistiquement significative.

**Résultats:** A cet effet 100 participant VIH+ sous ARV ont été enrôlés (Sex ratio H/F=1/3), la moyenne d'âge était 42,04 (13,59(10 ;72(ans avec une majorité agée de 40-60 ans.. La prévalence globale des mono-infestations parasitaires était de 55%(55/100) parmi lesquels les coccidies 32,7% (18/55) et les amibes 67,3%(37/55) avec respectivement *Cryptosporidium parvum* 21,8%(12/55) et *Entamoeba histolytica* 50,9%(28/55) les plus représentés. La prévalence de la co-infestations était de 13% soit 53,8%(7/13) de co-infestation coccidies/amibes et 46,15%(6/13) amibes/amibes. Les patients VIH+ de la zone rurale étaient les plus touchés (64,5%vs46,9% zone urbaine,  $p=0,009$ ). Les mono ainsi que les co-infestations n'était ni associées à l'âge des participants, ni a la durée sous traitement ARV, ni au niveau d'étude ( $p=0,98$ ) et leur prévalences semblaient diminuer après le 6 mois sous TARV.

**Conclusions:** L'amibiase et la coccidiose due respectivement à *Entamoeba histolytica* et *Cryptosporidium parvum* constitue une cause majeur de la diarrhée de l'immunodéprimé a l'Ouest-Cameroun. Une recherche systématique de ces infestations chez les patients de moins de 6 mois de traitement ARV et des mesures prophylactiques individuelles, hygiéno-dietétiques et environnementales s'imposent notamment en zone rurale.



## WEPEC096

### Connaissances et Pratiques des Agents de Santé en Milieu Hospitalier sur l'Hépatite Virale B en Zone de Forte Endémicité, Burkina Faso 2019

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Contexte de l'étude: Au Burkina Faso, l'hépatite virale B est fortement endémique. La prévalence chez les agents de santé est estimée à (12,1%) malgré des stratégies de prévention par la vaccination et la communication sur les risques infectieux. L'objectif de cette étude était de déterminer les connaissances et pratiques des agents de santé en milieu hospitalier sur l'hépatite virale B en 2019.

**Méthodes:** Entre avril et mai 2019, une étude transversale descriptive de type Connaissance attitudes et Pratiques a été réalisée dans trois Hôpitaux universitaires auprès des agents de santé de la capitale (Ouagadougou). Un questionnaire auto administré a été soumis aux agents de santé. A cet effet, un échantillonnage aléatoire stratifié (strate=service) a été effectué.

**Résultats:** Sur 392 agents de santé, 300 (76,53%) ont répondu au questionnaire. L'âge moyen était de 37,41 +/- 0,52 ans avec prédominance féminine (sex ratio = 0,75). Les infirmiers (38,33%), les médecins (19%), les garçons/filles de salle (12,67%) étaient les plus représentés. Les agents enquêtés étaient en activité depuis 10 ans en moyenne. Les modes de transmission du virus de l'hépatite B (VHB) n'étaient pas connus par 113 (37,6%) des agents de santé, dont 80 (70,8%) femmes et 33 (29,20%) hommes. Plus de deux tiers des agents (70,33%) ne savaient pas que le VHB pouvait survivre pendant 7 jours sur les surfaces contaminées. Quarante agents de santé (13,33%) ont été victime d'un accident d'exposition aux liquides biologiques au cours des 6 derniers mois. Ces accidents prédominaient chez les femmes (55%). Parmi ceux-ci, 17 (48,57%) ont déclaré l'accident et ont pris des mesures. Le mode d'accident était majoritairement par piqûre avec une aiguille souillée (38,46%). La moitié des agents de santé ont déclaré ré-capuchonner les aiguilles après leur utilisation. Un quart (25%) des agents de santé ne connaissaient pas les mesures à prendre devant un accident d'exposition aux liquides biologiques.

**Conclusion et Recommandations:** Les agents de santé en milieu hospitalier, principalement les femmes, ont des connaissances limitées et des pratiques à risques par rapport à la transmission de l'hépatite virale B. Ces résultats montrent la nécessité de renforcer les capacités et les compétences dans les formations sanitaires du Burkina Faso (formation, monitoring, évaluation des agents de santé).

**Mots clés:** Agents de Santé, Burkina Faso, Connaissances, Hépatite virale B, Pratiques

## **WEPEC097**

### **Infection par l'Herpès Simplex Virus de Type 2 (HSV-2) chez les Travailleuses du Sexe à Ouagadougou, Burkina Faso**

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**Introduction:** L'infection causée par Herpès simplex virus type 2 (HSV-2) est un problème de santé publique, et constitue l'une des principales causes d'ulcérations génitales dans le monde. L'objectif de notre étude était de déterminer la séoprévalence du virus de l'herpès simplex virus de type 2 (HSV-2) et d'évaluer la relation entre l'infection à HSV-2, les facteurs sociodémographiques et les pratiques sexuelles des travailleuses du sexe (TS) au Burkina Faso.

**Méthodologie:** Il s'est agi d'une étude transversale auprès de TS âgées de 18 ans au moins à Ouagadougou. La collecte des données a eu lieu de février à mai 2013 et a consisté en l'administration d'un questionnaire comportemental et d'un prélèvement sanguin en vue de la recherche des marqueurs d'infections du HSV-2. Les données ont été analysées à l'aide du logiciel Stata 14. Des statistiques descriptives ont été utilisées pour décrire les caractéristiques des participantes, la prévalence des marqueurs infectieux, ainsi que les pratiques et comportements sexuels.

**Résultats:** Au total, 348 TS ont participé à l'étude. L'âge moyen était de 24.9±6.4 ans. Plus de trois quarts des TS testées étaient porteuses d'anticorps anti-HSV-2 (75,7%, IC95% :70,8-79,9). Le portage des anticorps anti-HSV-2 variait de 69,3% chez les TS de moins de 24 ans à 88,5% chez celles de 30 ans au moins. Aussi, lorsqu'on examine le portage des anticorps anti-HSV-2 selon le niveau d'éducation des TS, on note qu'il est plus élevé chez les TS sans aucun niveau (87,7%) et régresse significativement chez celles ayant au moins le niveau primaire (76,0%) puis chez celles ayant le niveau secondaire et plus (64,9%). Nous n'avons pas trouvé d'association entre le portage des anticorps anti-HSV-2 et les caractéristiques socio-professionnelles des TS enquêtées.

**Conclusion:** L'infection par le HSV-2 est très courante dans notre échantillon confirmant la nécessité d'une mise en place de mesures préventives efficaces surtout que les lésions occasionnées peuvent favoriser la transmission du VIH. La prévention de la transmission sexuelle par l'éducation sexuelle d'une part et le dépistage précoce du HSV-2 d'autre part devra être envisagée chez les travailleuses du sexe.

**Mots clés:** HSV-2, infection, Travailleuses du sexe, Ouagadougou, Burkina Faso.

## **WEPEC098**

### **Underserved. Overpoliced. Invisibilized: LGBT Sex Workers Do Matter**

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**Issues:** The struggle for sex workers' rights intersects with many other social movements. Contrary to the monolithic abolitionist discourse, which portrays all sex workers as "prostituted women" without agency, our communities are diverse and resilient. Sex workers are male, female and non-binary, LGBTQ, migrants and workers. Supporting sex workers' rights means understanding the diversity and complexity of our lives and involving sex workers from diverse communities in decision making, policy making and debates. Sex work is a multi-gendered phenomenon, and sex workers of all genders and sexual orientations offer sexual services and are actively involved in the sex workers' rights movement. Sex workers and LGBT people have long shared a common history: for instance, trans sex workers have been among the main driving forces in the LGBT movement.

**Descriptions:** Since the early days of sex workers' activism, sex workers have been calling for rights similar to those on the feminist and gay rights agenda, demanding freedom of sexual expression, the right to autonomy and self-determination or an end to discrimination and social marginalisation. The homophobic and transphobic social climate LGBT individuals live in and the social marginalisation they face is one of the main reasons why many LGBT people use sex work as a livelihood option. In many African countries, they therefore have limited economic and employment opportunities.

**Lessons learned:** Sex workers and LGBTQ people share a powerful history of resistance against stigma, discrimination, (police) violence and criminalisation. The equality agenda of the LGB movement has, for many years, left behind both trans communities and sex workers, often the most vulnerable to violence and abuses. It is time for the LGBTQ movement to remember its commitment to inclusion, listen to sex workers and take an unequivocal position in favour of sex workers' rights and decriminalisation of sex work.

**Next steps:** Engage in campaigns and policy discussions relevant to the issues of sex workers, Call upon feminist organisations for an intersectional, trans- and sex worker-inclusive approach, Speak out for the full decriminalisation of sex work, highlighting the precarious situation LGBT sex workers live in and Reach out to and establish contacts with local sex worker groups and organisations in order to identify common issues and assess the situation of LGBT sex workers.

## WEPEC099

### The Effectiveness of the Combination of Preventive Interventions for MSM in Bangui, Central African Republic: A Randomized Trial

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**Background:** Men who have sex with men (MSM) are a high-risk population for STIs/HIV in the Central African Republic (CAR). This study aims to test the effectiveness of the combination of behavioral, biomedical and structural interventions in MSM in the context of a security crisis.

**Methods:** The interventions were conducted from June 2014 to October 2016. Participants (n=215) were enrolled in the National Reference Centre for Sexually Transmitted Infections and Antiretroviral Therapy (CNRIST/TAR), which constitutes the principal clinic for sexually transmitted infections of Bangui. The intervention group (n=40) was randomly selected. The remaining (n= 175) was the control group. The two groups participated in a series of STI/HIV upgrading training sessions over three days at the beginning of the study. Then, intervention group received three types of interventions.

1) Biomedical interventions: antiretroviral treatment as prevention (TaP), STI diagnosis and treatment, and HIV counseling.

2) Psychosocio-educational interventions: Interactive training, educative talks, social assistance and text messages.

3) Structural interventions: Ensuring that condoms are available and free of charge. The effects of the combining interventions were assessed by reducing the number of sexual partners, increasing the frequency of condom use and reducing the number of STI cases in the intervention group.

**Results:** The median of casual sexual partners in the previous three months was significantly reduced in the intervention group ( $p < 0.000$ ). The percentage of MSM having 100% of protected intercourse has significantly increased ( $p < 0.000$ ). Only one MSM out of 40 was infected with HIV versus nine out of 76 in the control group. No negative subjects in the intervention group became positive for hepatitis B. There has not been a significant increase in new case of syphilis infection ( $p < 0,000$ ).

**Conclusions and Recommendations:** The combination of interventions has an impact on improving risk behaviors and probably reducing the incidence of STI/HIV among MSM, even in times of humanitarian crisis.

## **WEPEC100**

### **Etude CAP sur la Santé Sexuelle et Génésique Auprès des Adolescents-Élèves de 15 à 19 Ans de 50 Écoles de la Ville de Kinshasa/RDC**

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**Contexte et justificatif:** Les adolescents représentent le cinquième de la population mondiale. Ils constituent le défi majeur de l'heure où le nombre de décès liés au SIDA ne diminue pas en raison de leur comportement sexuel à risque, de leur manque d'accès à l'information sur le VIH et aux services de prévention.

**Objectif:** Evaluer les connaissances, attitudes et pratiques sur la santé sexuelle et génésique des élèves âgés de 15 à 19 ans dans 50 écoles de la ville de Kinshasa/RDC.

**Méthodes:** Etude transversale descriptive menée en novembre 2018 auprès de 500 élèves de 10 à 19 ans fréquentant 50 écoles ciblées dans le cadre de l'initiative ALL IN Kinshasa/RDC.

Au total, 111 adolescents élèves âgés de 15 à 19 ans ont été enrôlés.

La collecte des données a été faite à partir d'un questionnaire d'enquête fermé, remplis face à face.

Les données recueillies ont été analysées par le logiciel épi info 2000.

**Résultats:** Sur 111 élèves adolescents, 69(62,1%) étaient de sexe féminin et 42(37,8%) de sexe masculin, la moyenne d'âge était de 16 ans.

La majorité des enquêtés, 88 (79,2%), avait déjà entendu parler du sida, le média constituant la principale source d'information.

Les voies de transmission citées étaient la voie sexuelle 83(74,7%), la voie sanguine 62 (55,8%) et la voie materno-fœtale 45(40,5%).

L'abstinence a été le moyen de prévention le plus souvent cité 65 (58,5%), suivi de la bonne fidélité 51 (45,9%), du préservatif 43(38,7%) et du dépistage 28(25,2%).

Pour 52,5% des enquêtés, les pilules protégeaient aussi contre le VIH et les IST.

Seuls, 35 (31,5%) des enquêtés avaient un (une) copain(e) et parmi eux, 11(31,4%) étaient sexuellement actifs. L'utilisation des préservatifs n'a été notée que dans 27,3% des cas et la pilule du lendemain après le rapport sexuel n'a été effective que dans 18,1% des cas.

14 (12,6%) enquêtés avaient avoué de contentaient des caresses génitales jusqu'à l'orgasme.

Cinquante-cinq (57,6%) enquêtés avaient déclaré avoir besoin des enseignements sur la santé sexuelle et reproductive, 11(10%) ont jugé que c'était précoce pour leur âge et 7(6,3%) avaient jugé que c'était trop tard.

**Conclusion:** Le renforcement des capacités sur la santé sexuelle et génésique, les milieux scolaire, non scolaire et familial, s'avère nécessaire et impérieux afin de réduire l'impact négatif des méconnaissances et permettre aux adolescents et jeunes de mieux gérer leur sexualité et aussi d'accéder à certains services de la santé sexuelle et reproductive.

## **WEPEC101**

### **Knowledge, Attitudes and Practices of Police Officers towards Key Populations in Zimbabwe**

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**Background:** Key populations are 10 times more likely to become infected with HIV than the rest of the people in the general population. Among other reasons, the high HIV prevalence among key populations has been related to their inability to access and utilise HIV and AIDS services due to abuse and stigma from police officers. We therefore conducted a study to assess the knowledge, attitudes and actions of police officers towards sex workers and men who have sex with men as well as to identify advocacy and capacity issues for improving police officers attitudes and practices towards KPs.

**Methods:** A descriptive cross sectional study design was used. Quantitative and qualitative data was collected from police officers, sex workers and organisations that deal with MSM. 424 police officers were interviewed through Interviewer administered questionnaires, 20 focus group discussions were conducted with sex workers and five key informants were interviewed.

**Results:** Results indicated that 75.6% of the study participants had limited knowledge of HIV prevention methods whilst 6% had no knowledge. Regarding KPs vulnerability to HIV, 10% (95%CI: 7.3%-13.3%) of study participants agreed with the statement that all key population are HIV positive with 90% (95% CI: 86.7%-92.7%) disagreeing. 60% of the study participants had arrested FSW, 14.3% had arrested MSM in the past two years. 269 police officers (64%) expressed their willingness to build collaboration with key populations in their work. The majority 68% of the study participants were of the attitude that they can help in eliminating unequal treatment of key populations. The majority (63.6%) of the study participants would accept reorientation (90.1%) to improve the policing of key populations.

**Conclusions and Recommendations:** Most of the police officers have limited knowledge on HIV prevention methods and groups that constitute key populations. The majority of the officers have arrested key populations for their sexuality. Overall, the officers lack understanding of laws that relate to key populations and are open to capacity building to eliminate unequal treatment of key populations. The study recommended capacity building of police officers in HIV prevention methods, the rights of KPs and related legal issues for better HIV prevention outcomes among KPs.

## **WEPEC102**

### **Assessment of Retrospective and Current Substance Use in Women who Inject Drugs in Low-income Urban Settings in Kenya**

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**Background:** Women Who Inject Drugs(WWIDs) continue to experience challenges that accumulate their risk to HIV transmission and other co-morbidities. However, data that conceptually link diverse substance use dimensions in WWIDs are lacking particularly in developing countries.

**Methods:** We assessed retrospective and current substance use among 306 WWIDs in low-income urban settings in Kenya using mixed methods. Descriptive analyses were performed on quantitative data while qualitative narratives revealed insights from quantitative findings.

**Results:** The mean age of the study participants was 17 years. Out of the 306 WWIDs 57% commenced with substance use by combining both licit and illicit drugs. Intimate sexual partners including spouses and casual sex partners introduced 74% of WWIDs to substance use. Persons who introduced substance used at age of onset was associated with current poly substance use among the women (Fisher exact  $P=0.000$ ). Majority of the of WWIDs (39.9%) commenced with 2-way substance combination with bhang and cigarette having the highest usage. However, 4-way substance combinations containing heroin, cigarette, bhang, valium, Rohypnol had the highest frequency (12.8%) at the time of the survey. Varied routes of heroin administration were mentioned including injection, smoking and sniffing as separate routes and as 2-way or 3-way mode combinations of these.

**Conclusion and Recommendation:** To inform policies targeting the health and rights of girls and women in low income settings, this study recommends urgent upstream policies targeting the girl adolescent life in form of a multifunctional package composed of identifying girls at risk, substance use interventions, sexual health education, improved educational attainment, and progressive social policies that target low social economic status in the adolescent phase.

## **WEPEC103**

### **Comportements Sexuels à Risque et Séroprévalence du VIH chez les Travailleuses du Sexe de Ségou en 2018**

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**Indiquer le Problème Étudié, la Question de Recherche:** Avec une séroprévalence au VIH estimé à 27,7% lors de la dernière enquête en 2009 à Ségou, les travailleuses du sexe constituent un groupe à risque élevé dans cette ville.

Afin de réduire les risques de contamination et de transmission du VIH au sein de cette frange de la population, de nombreuses campagnes de sensibilisation et de prévention ont été organisées à cet effet. La présente étude compte répertoriée les raisons du taux élevé de séroprévalence chez les TS au cours de leurs activités quotidiennes et d'en faire des recommandations.

**Méthodes:** Une étude longitudinale a été menée dans la ville de Ségou. Des tests de dépistage ont été effectués et un questionnaire prétexté renseignait sur différentes variables. Le test de khi carré a été utilisé pour la mesure des associations entre variables. Le seuil de significativité était de 5%.

**Résultats:** Cette étude a concerné 175 TS. La séroprévalence était 11,43%. L'âge moyen était de 28,9ans. On comptait 20,45% de TS de séropositives avec des notions de rupture de condom (P=0,00016). Les TS avec 5 ans et plus dans le travail du sexe étaient séropositives à 25% (P=0,00052), les TS qui avaient ces comportements suivants l'utilisation du savon, de l'eau de javel pour toilette intime, excitation du pénis au vagin avant l'utilisation du condom étaient séropositives respectivement à 15,09%, 16,67% et 55,56% (P=0,0293). On ne notait pas d'association significative entre l'utilisation du condom avec leur boy-friend et le statut sérologique (P=0,1369), encore moins l'utilisation du condom avec le partenaire occasionnel (P=0,3873), non plus avec la consommation de stupéfiant (P=0,5487)

**Conclusions et Recommandations:** La séroprévalence reste importante chez les travailleuses du sexe à Ségou. Cette étude montre une relation entre ce taux de séroprévalence élevé et des comportements tels que : les ruptures de condom, l'utilisation de savon, d'eau de javel, des frottements du pénis au vagin avant pénétration. Des efforts de sensibilisation orientée sur ces pratiques sont donc recommandés au profit de cette population à risque.

**Mots Clés:** VIH- Comportement- Risque - travailleuse de sexe - Ségou- ARCAD-SIDA-Mali- 2018.



## **WEPEC104**

### **Influence du Handicap sur l'Observance au Traitement ARV à l'Hôpital de Jour du CHU-YO de Ouagadougou au Burkina Faso**

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**Justification/Objectif:** L'un des critères de réussite du traitement antirétroviral des personnes vivant avec le VIH est une observance optimum. L'objectif de notre étude était d'analyser cette observance chez les personnes handicapées de la file active de l'hôpital de jour du Centre Hospitalier Universitaire Yalgado Ouédraogo de Ouagadougou

**Méthodologie:** Il s'est agi d'une étude transversale par observation directe et par entretiens ayant concerné des personnes handicapées infectées par le VIH de la file active de l'hôpital de jour menée de novembre 2018 à février 2019.

**Résultats:** 85 personnes handicapées avec un âge moyen de 44 ans avaient été recensées soit 45 femmes (52,94%) et 40 hommes (47,06%). 44 femmes (51,76%) étaient infectées par le VIH 1 et une par le VIH 1+2. 38 hommes (44,71%) vivaient avec le VIH 1, un par le VIH 2 et un par le VIH 1+2. 4 PvVIH (4,71%) avaient une durée du traitement ARV comprise entre 3 et 11 mois, 22 (25,88%) comprise entre 1 et 9 ans et 59 (69,41%) entre 10 ans et plus. 38 femmes (59,38%) et 26 hommes (40,62%) présentaient un handicap physique ; 7 hommes (63,63%) et 4 femmes (36,37%) avaient une déficience visuelle ; 3 hommes (75%) et une femme (25%) souffraient d'une déficience auditive ; 4 hommes (66,67%) et 2 femmes (33,33%) présentaient des déficiences psychiques. 26 patients (40,07%) et 33 patientes (55,93%) étaient en première ligne de traitement. Au cours du suivi, un certain nombre de patients présentaient un échec thérapeutique suite à une mauvaise observance : ainsi, 18 patients dont 8 hommes (44,07%) et 10 femmes (55,93%) étaient passés en traitement de deuxième ligne ; 8 patients dont 6 patients (75%) et 2 patientes (25%) en troisième ligne. 75 personnes dont 34 hommes (45,33%) et 41 femmes (54,67%) habitaient dans un rayon de 0 à 10 kilomètres du centre ; 4 patients (80%) et une patiente (20%) habitaient entre 11 et 50 kilomètres ; 2 hommes (40%) et 3 femmes (60%) étaient à plus de 150 kilomètres.

**Conclusion:** Les patients handicapés en fonction du type de handicap éprouvent de véritables difficultés d'accès au centre de prise en charge pour leur approvisionnement, leurs bilans biologiques et leur suivi médical. Pour minimiser ces difficultés qui entravent une bonne observance, ces personnes ont besoin d'un accompagnement spécifique aussi bien de leur entourage que des structures de prise en charge.

## **WEPEC105**

### **Is Emergency Contraceptive Use a HIV Transmission Predictor? A Case of University Students at an Urban University Campus in Kenya**

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**Background:** College students, engage in high levels of unprotected sexual activity despite relatively high rates of HIV/STI and pregnancy-related knowledge. Young and unmarried women constitute a high proportion of key users of emergency contraceptives and the most at risk of contracting of HIV/AIDS. This study aimed at assessing HIV risk attitude and use of emergency oral contraceptives among female university students at an urban university campus in Kenya.

**Methods:** This was a descriptive cross sectional study that was carried out at Moi University, Eldoret West Campus. 332 female students were sampled via stratified sampling. Respondents were grouped into strata as per their schools. Once the number of students per school was established, stratification per year of study then followed and proportionately the respondents were allocated. Thereafter simple random sampling was done to get the individual student who participated through their registration numbers. Data was entered and analyzed using STATA 11.2 (StataCorp, Inc, Texas, USA).

**Results:** Majority of the respondents (57.58%) were between ages 20 to 24 years. Though quite a number of respondents, 65.2% agreed that safe sex is when one uses a condom, 65.8 % (n=208) had ever used emergency contraceptives. Majority, 70.2% (n= 214) believed that there is a link between HIV/AIDS and usage of emergency contraceptives(OR, 2.3; 95% CI, 1.4,3.8). 13.4% (n= 40) knew of a person /friend who had contracted HIV in the course of using E-pills after unprotected sex. 74.2% (n=221) reported that including precautionary messages on emergency contraceptive packages could play a role in the war on HIV/AIDS.

**Conclusions:** Even though female students reported high awareness level on HIV and contraceptives, they still engaged in unprotected sexual intercourse and used emergency contraceptive to prevent pregnancy. This exposes them to a major risk of contracting HIV. Is it time we advocated for universal HIV pre-exposure prophylaxis for college students?

**Keywords:** Emergency contraceptive, HIV transmission, predictor, university students

## **WEPEC106**

### **Knowledge and Attitude Regarding the Female Condom among Female Tertiary Students in the Hohoe Municipality of Ghana**

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**Background:** Biological and socio-cultural vulnerability put women at a higher risk of contracting HIV than men. However, the female condom (FC), a female-controlled method that prevents HIV transmission just like the male condom, is relatively new. The knowledge regarding the FC among women of reproductive age and the attitudes towards it can affect its usage in HIV prevention. The current study investigated the knowledge and attitude regarding the female condom among tertiary female students in the Hohoe Municipality of Ghana.

**Methods:** A descriptive cross-sectional design was adopted. Data were collected using a structured questionnaire in January 2019 and analysed using STATA version 14.0. Logistic regression was used to measure the strength of associations between dependent and independent variables at the 0.05 level of significance.

**Results:** A total of 398 respondents were involved in the current study with a mean age of  $25.2 \pm 19.4$ . The overall knowledge and attitude regarding the FC were 88.4% and 51.8% respectively. Those who were aged 30-39 years were 34 times more likely to have a good knowledge regarding the FC compared to those who were less than 20 years [AOR=34.49(CI: 1.81-655.98)  $P < 0.018$ ]. Respondents who were aged 30-39 years were 4 times more likely to have a positive attitude towards the FC [AOR =3.75(C.I: 1.51, 7.17)  $p < 0.003$ ]. Respondents from UHAS were 7 times more likely to have a positive attitude towards the FC [AOR = 6.70 (C.I: 3.18, 14.10)  $p < 0.001$ ], while those from Midwifery training school were 2 times more likely to have a good attitude towards the FC [AOR =2.38(C.I: 1.12, 5.06)  $p < 0.024$ ].

**Conclusions and Recommendations:** The students had relatively good knowledge and a negative attitude towards the FC. Health promotion interventions to improve the knowledge and attitude regarding the female condom should focus more on students in the lower age groups and those from the non-health related institutions.

## **WEPEC107**

### **Premières Consultations Médicales des Femmes Ayant des Relations Sexuelles avec des Femmes (FSF) dans les Cliniques Associatives d'Abidjan: Etats des Lieux dans Deux Centres de l'Ong Espace Confiance**

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**Contexte:** En Côte d'Ivoire, la Santé Sexuelle et Reproductive (SSR) des FSF est peu prise en compte par les politiques de santé publique malgré les études internationales mettant à jour des vulnérabilités spécifiques en matière de violences, d'Infections Sexuellement Transmissibles (IST) et de renoncement aux soins dans ce groupe devant le jugement. L'objectif de ce travail est de décrire les caractéristiques socio-démographiques et médicales des FSF dans deux cliniques associatives d'Abidjan.

**Methode:** Il s'agit d'une étude transversale rétrospective à partir des données de routine des premières consultations médicales des FSF dans deux cliniques associatives d'espace Confiance. Ont été incluses, toutes les FSF à leur première visite du 11/11/2008 au 31/12/2018 à Marcory et du 29 /03/2018 au 31/12/2018 à Yopougon. Le dossier contenait un questionnaire sociodémographique et comportemental ainsi qu'une fiche pour le recueil des données des examens cliniques et biologiques. L'offre de santé proposée incluait un examen clinique, le dépistage et le traitement de l'infection par le VIH, le dépistage syndromique et le traitement des IST au centre de Yopougon et l'approche syndromique couplée à un examen à l'état frais des sécrétions cervico-vaginales à Marcory. Etait associé, le diagnostic des lésions précancéreuses du col de l'utérus par la méthode de l'Inspection Visuelle à l'Acide acétique (IVA) et leurs traitements par la cryothérapie. Les clientes recevaient des conseils, des préservatifs et du gel lubrifiant.

**Resultats:** Sur les 373 FSF enregistrées l'âge médian était de 24 ans (min-max :16-49 ans). Presque la totalité était de nationalité ivoirienne 97,8% (365/373) et environ deux-tiers avait un niveau d'étude secondaire 69,7% (260/373). La prévalence du VIH était de 0,8% (2/241). Parmi les FSF déclarant des rapports hétérosexuels, 90,2% (147/163) utilisaient pas systématiquement le préservatif. Seules 7,2 % (7/97) de celles pratiquant des pénétrations vaginales à l'aide des doigts et/ou d'objets sexuels les enrobaient toujours de latex protecteurs. 57,8% (70/121) des FSF de Marcory présentaient une IST en l'absence de signes fonctionnels chez 42,5% (30/70) d'entre elles. Un cas suspect de cancer du col de l'utérus sur 11 IVA réalisées.

**Conclusion et Recommandations:** Des services de SSR adaptés aux problématiques des FSF doivent être renforcés afin notamment d'y promouvoir les pratiques sexuelles à moindre risques.

**Mots Cles:** FSF, VIH, IST, Abidjan

## **WEPEC108**

### **Assessment of Commercial Sexual Exploitation among Female Minors in High-risk Areas of Uganda Copy**

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**Introduction:** Globally, Commercial Sex Exploitation (CSE) remains a serious burden and a violation of children rights. The purpose of this study was to examine the magnitude and factors associated with commercial sexual exploitation in Uganda.

**Methodology:** Cross sectional study was conducted in three high-risk areas of Uganda: Kampala, Namayingo and Arua to include perspectives of CSE from an urban, rural and humanitarian setting. A total of 822 quantitative interviews were conducted among among female minors population self-identifying as engaged in CSE and those who did not self-identify as such. The minors were aged between 12 to 17 years and were identified in various hot spots (brothels, lodges and bars). A waiver of parental consent was obtained to gain consent directly from the minors and maintain confidentiality. Data was collected using a structured questionnaire. Quantitative data was analyzed using descriptive statistics and Chi-square tests. Subsequent adjusted and unadjusted logistic regression analyses were used to determine the factors associated with CSE.

**Findings:** Majority 63% of the 822 female minors interviewed engaged in CSE. Majority of the minors in CSE 57% were in, Kampala, followed by Arua 26% and Namayingo 17%. Majority 84% were not in school. 38% of the minors in CSE reported sex work as the main source of income, 91% reported their parents were unemployed. 71% of the minors who were not using condoms sited fear of violence from the customers as the reason for not using condoms. Multivariate analyses shows minors in CSE are more likely to report drug use (OR=8.2, CI: 4.9-13.8), be drinking alcohol (OR=6.8, CI: 4.7-9.8), have an earlier sexual debut at age 10-14 (OR=2.7, CI: 1.3-5.8) and had migrated (OR=2.4, CI: 1.7-3.20) compared to those who were not engaged in CSE. CSE itself is a risk factor that often lead to poor health outcomes.

**Conclusion:** Adolescent girls on CSE are vulnerable to poor health outcomes which have devastating effects on their meager economic life. These include risk of unwanted pregnancies, unsafe abortion, STI, GBV and HIV. Attention to one risk factor ignores the broader social context of CSE.

**Recommendation:** Multisectoral approach is vital in order to reach minors in CSE with comprehensive SRH/HIV/GBV and economic empowerment programs. Investment needed to review and implement existing policies and laws that protect minors from CSE.

**Keywords:** Sex work, Minors, Sexual Exploitation, Violence

## **WEPEC109**

### **Comportement Sexuel à Risque, Utilisation du Préservatif, Dépistage du VIH et Facteurs Associés chez les Étudiants de l'Université de Kinshasa, République Démocratique du Congo**

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**Introduction:** Le VIH/SIDA est un problème majeur de santé publique. Les étudiants universitaires sont souvent un groupe jeune susceptible de transmettre et acquérir le VIH.

**Objectifs:** Les objectifs étaient de rechercher le comportement sexuel à risque, de mesurer le taux d'utilisation du préservatif et du dépistage du VIH ainsi que d'identifier les facteurs associés au dépistage du VIH et à l'utilisation de préservatif chez les étudiants à l'Université de Kinshasa.

**Méthodes:** Une étude transversale à visée analytique réalisée d'avril à juin 2017 à l'Université de Kinshasa. L'échantillon comprenait 422 étudiants universitaires choisis de manière aléatoire et les facultés ont été retenues par un choix raisonné. Les données ont été recueillies au moyen d'un questionnaire auto-administré, anonyme et volontaire sur le comportement sexuel et le dépistage du VIH. La régression logistique a été utilisée pour identifier les facteurs associés au dépistage du VIH et à l'utilisation du préservatif.

**Résultats:** Sur un total de 422 étudiants, 54,3% étaient âgés de 20 à 24 ans. Il y avait plus d'hommes (53,6%) que des femmes. Le tiers des étudiants (34,8 %) était sexuellement actif, 219 (51,9%) étudiants rapportaient avoir un partenaire sexuel et 21 (5%) avaient deux ou plusieurs partenaires. Vingt-huit pourcent des étudiants ont utilisé le préservatif lors du dernier rapport sexuel. Quarante-six pourcent se sont déjà faits tester au VIH. Les raisons de dépistages étaient le plus souvent le souci de connaître sa sérologie.

En analyse multivariée, les facteurs associés au dépistage du VIH est la connaissance du statut VIH du partenaire ( $p < 0,001$ , ORaj 2,32 ; IC95% [1,46-3,68]) et les facteurs associés à l'utilisation du préservatif étaient le fait d'avoir un partenaire sexuel [ $p < 0,001$ , ORaj 14 ; IC95% (6,68-29,38)], la connaissance du statut VIH du partenaire ( $p < 0,001$ , ORaj 3,86 ; IC95% [ 2,41-6,19]) et être en troisième année ( $p=0,007$  , ORaj 2,63 ; IC95% [1,30 -5,35]).

**Conclusions et Recommandations:** L'activité sexuelle des étudiants associée à une faible utilisation du préservatif et un faible dépistage impose la sensibilisation pour améliorer les mesures de prévention afin de contribuer à l'élimination du VIH d'ici 2030.

## **WEPEC110**

### **HIV Risks and Engagement with Care among Female Sex Workers in Nsanje (Malawi): Findings from a Respondent-driven Sampling Study**

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Globally, female sex workers (FSW) are 14 times more likely to be infected with HIV than adult women of the general population. They face high levels of violence, stigma and discrimination. In Nsanje, a large number of women engage in sex work along the male work sites and transport routes. The Médecins sans Frontières (MSF) FSW project in Nsanje is a community-based peer-led intervention supporting provision of comprehensive care for female sex workers.

Between February and April 2019, a cross-sectional respondent driven sampling (RDS) survey was implemented in Nsanje district among FSW in order to assess their engagement with HIV care. Eligible participants were women and girls aged 13 years or older who lived and worked in the district in the previous six months and had sexual intercourse with someone other than main partner in exchange for money or goods in the last 30 days. Consenting participants were interviewed and tested for HIV, syphilis, gonorrhoea and chlamydia. Viral load (VL) and CD4 count were measured for all HIV-positive participants and RDS-adjusted proportions were calculated. Sexual violence was defined as having ever been forced to have sex or sexual practices against the will.

In total, 363 participants were included, of whom 64.2% (95%CI: 59.6-69.5) reported already receiving care from MSF. The median age was 26 years [IQR: 20-33], the median duration of sex work was 4 years [3-7] and the majority of the women were single (79.3%). HIV prevalence was 52.4% (47.2-57.6) and was strongly associated with age reaching 87.9% (78.8-93.4) after 35 years old. Achievement to 90-90-90 showed that HIV status awareness was 95.2% (91.3-97.4), ART coverage (self-reported) was 99.6% (97.0-99.9) and VL suppression was 83.3% (77.2-88.0). The prevalence of syphilis was 30.0% (29.6-35.6), gonorrhoea 10.9% (7.5-15.6) and chlamydia 13.0% (9.1-18.2). Inconsistent condom use was reported by 52.9% (47.8-58.1) of the women. More than half (52.4% (47.3-57.6)) had ever experienced sexual violence, and for 46.2% of them (39.1-53.5), it happened at least once during the previous month. Our findings suggest a population with high exposure to sexual violence, poor condom use and a high prevalence of HIV and STIs. Awareness of HIV-positive status and linkage to care was very high. Our results reinforce the importance of programs targeting FSW in the area, with a focus on adolescents and prevention strategies including pre-exposure prophylaxis (PrEP).

## **WEPEC111**

### **The Increase in Prevalence of Adolescents and Young People Engaging in Risky Behavior: A Threat to Achieving the ESA Commitments 2020 Targets**

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**Issues:** In Zambia, inter-generational and transactional sex, and unintended pregnancy have gained significant attention in recent years because of the high rates. Poverty, gender inequality, lack of education and cultural customs and traditions has been highlighted as key drivers. The study aims to contribute to enhancing the decision making space of Adolescent and Young People (AYP) about if, when and whom to sex.

**Descriptions:** There is a strong relationship between the HIV epidemic and poverty and livelihood security: livelihood insecurity can lead people into risky behavior patterns such as inter-generational and transactional sex or migration in search of work both putting them at risk of exposure to HIV. The prevalence of AYP engaging in inter-generational and transactional sex due to poverty levels is rapidly increasing, thus increasing the risk of contracting STIs, HIV and early/unintended pregnancies. AYP engage in inter-generational and transactional sex due to lack of financial resources hoping to get a better life.

**Lessons learned:** The study also explores how these problems are entrenched in local culture and young people's involvement in decision making processes around sexual and reproductive health. The study showed that economic barriers also negatively influence health oriented adolescent programs, and these need to be addressed during programming and that at the household level, it tends to prevent participation in health programs and prevent desired health outcomes from being achieved. The study also showed that AYP are unable to negotiate safe sex and are therefore vulnerable to diseases and violence. Focusing on economic empowerment and poverty reduction is a way of reducing AYP's vulnerability to SRH issues and HIV. The study also revealed that there is also need to have an incentive package across the board if AYP are to refrain from risky behaviors such as inter-generational and transactional sex and instead engaging in positive behavior practices. The increase in the prevalence of AYP engaging in such risky behavior is alarming and a threat to achieving the ESA Commitment 2020 targets

**Next steps:** The findings are used to optimize the intervention strategies and provide context-specific knowledge for advocacy and policy purposes. The capacity of AYP to cope with the impact of HIV need to be strengthened as they remain vulnerable and unable to negotiate for safe sex or access other HIV preventive services like PrEP and PEP



## WEPEC112

### **Substance Use, HIV, and Depression among Key Populations: Experience from a Mixed Cross-sectional Study in the City of Kigali, Rwanda**

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**Background:** Substance use and HIV prevalence are higher among key populations (KP) and are becoming a public health concern worldwide. Currently, the HIV prevalence in Rwanda is 3.0% and 6.0%, respectively for the general population and Kigali City. However, few data are available on the status of substance use, HIV prevalence and other comorbidities in KP, especially Men who have Sex with Men, Female sex workers, and People who inject drugs. The objectives of this study included (1) to examine the patterns, risk factors associated with substance abuse, and their consequences and (2) to determine the relationship between HIV infection and substance abuse.

**Methods:** This mixed-method, qualitative and quantitative study was conducted in all three districts of Kigali City from December 2018 to January 2019. Three structured and pre-tested questionnaires were used: the Beck Depression Inventory Short Form, an alcohol and substance use questionnaire, and a survey about HIV/AIDS prevention and treatment behaviors. Three Focus Group Discussions were carried out, the snowball sampling approach was used to recruit 480 participants. Descriptive statistics and multivariate logistic regression were used, qualitative analysis occurred in Atlas-Ti whereby transcripts were read and coded.

**Results:** The overall HIV prevalence rate was 8.3%. It is was 30.5% among FSWs, 5.9% among MSM, and 5.3% among IDUs. All respondents reported to use the substance. The substance abusers reported the following influencing factors: influence of peer groups (59.7%), loss of parents (11.1%), family conflicts (10.7%), unemployment (7.4%), family background of substance use (5.4%), community discrimination (3.8%), and others including being HIV positive (1.9%). Furthermore, 72.5% of the respondents were found with depression, and severe depression was 2.2 times more likely among KP who were HIV positive when comparing to those who were HIV negative ( $p=0.033$ ). MSM and IDUs during FGDs stipulated that many of them started increasing drug consumption when they discovered that they were HIV positive.

**Conclusions and Recommendations:** These findings will help policy-makers to strengthen the preventive measures for HIV, substance use and comorbidities especially in KP. They will also be useful in making informed decisions regarding the drug policies and improved access to HIV and drug treatment services for KP. Further studies are required to address this issue countrywide.

## **WEPEC113**

### **Risks Perceptions, Drivers and Coping Mechanism of Commercial Sexual Exploitation among Female Minors in Uganda: A Qualitative Study**

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**Introduction:** Commercial Sexual Exploitation (CSE) is a significant global and public health problem and a serious violation of the rights and dignity of children. One million minors have been estimated to be involved in CSE globally and CSE has both short and long term, physical, psychological and social consequences

**Methodology:** An ethnographic qualitative study was conducted in three high-risk areas of Uganda: Kampala, Namayingo and Arua to include perspectives of CSE from urban, rural and humanitarian settings. A semi-structured interview guide was used in the 21 In-depth discussions conducted with female minors and the 12 key informant interviews. Further, hot spot observations were made during data collection. The female minors were aged 12-17 years and had self-reported as engaged in CSE and were recruited using snowball. Nvivo 12 was used to code and analyze qualitative data

**Findings:** Entry into CSE is a result of multiple vulnerabilities and social conditions, such as gender, age, socioeconomic status, and community tolerance for minors in CSE. An accumulation of vulnerabilities combined with an intersection of the minors' social identities (age, gender, class) influenced the minors' entry to CSE. Most of the minors involved in CSE were leaving home to join sex work as a result of poor economic circumstances, violence, or inadequate family support. The female minors use different coping strategies to maximize income they get from CSE. This includes negotiating higher prices for not using a condom, which instead leaves them vulnerable to unwanted pregnancies, SGBV, HIV/AIDS and other STIs. The female minors are aware of the consequences of unprotected sex, but they are trapped in a circle of vulnerabilities (poverty, low education, low paid jobs, limited support from fathers, expectation of female minors to support their families, SGBV and migration) that they cannot run from, and thus make decisions that ends up making them more vulnerable to adverse SRH outcomes

**Conclusion:** Female minors in CSE are vulnerable to adverse SRH and economic outcomes given the social, contextual, risk perceptions and coping strategies demonstrated.

**Recommendation: Design:** prevention interventions targeting the window of opportunity (10-14 years), interventions that address factors that push female minors into CSE and engage boys and men in addressing CSE. Enforce laws that protect minors from CSE.

**Sex work, Multiple vulnerabilities, Risk perceptions, socio-economic factors**

## **WEPEC114**

**Evaluation Sanitaire et les Risques de l'Infection aux VIH/IST chez les Usagers de Drogue au Mali**  
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**Cotexte et Objectif de l'Etude:** Dans un contexte Malien marqué par une forte répression, les pratiques à risques sont de plus en plus élevées chez les UDI, ainsi qu'un risque élevé de l'exposition de la population générale à la transmission du VIH. Les interventions existantes, ne permettent pas de répondre efficacement aux besoins, au manque de moyens de prévention et de RdR adéquats à leur mauvaise utilisation (périodique, usage) y compris par les AC de terrain. L'intolérance, la discrimination, la stigmatisation et la peur des populations vis-à-vis des UD (y compris les agents de santé). Cette situation a entraîné leur vulnérabilité sociale et sanitaire. L'objectif de la production de l'article vise à alerter les autorités et les acteurs de la santé sur l'effectivité et l'atteints des objectifs 90-90-90 sans les ud.

**Méthodologie:** L'étude et la production de cet article à été réalisé sur la base des interventions terrain auprès des usagers de drogues injectables dans 12 fumeurs, à moyenne 10 personnes usagère dans chaque fumeur. Et la synthèse des ateliers parlementaire au Mali

**Résultats:** Les femmes représentaient à moyenne 2 dans chaque fumeur, les jeunes de 20 à 40 ans étaient majoritairement représentés. Cette évaluation révèle une CD et risques associés. 77% réutilisent leurs propres et 59,5% utilisent des seringues usagées ce qui multiplie la transmission du VIH et du VHC. Les comportements sexuel et statut sérologique a des rapports sexuels non protégés est très élevés et à des rapports sexuels commerciaux non protégés. Une méconnaissance de leur statut sérologique en matière de VIH.

**Conclusion et Recommandation:** Il est urgent pour le Mali, d'adopter des mesures concrètes/législative pour que les activités/associations communautaires et de réduction des méfaits puissent être mises en place. Elles pourraient se décliner comme suite : Autoriser un traitement de substitution aux opiacés, autoriser la mise en œuvre d'un programme d'échange de seringue par des centres spécialisés et à moindre risque. Formés les agents de santé sur la drogues et VIH.

**Mots-clés:** UDI : Usagers de drogue injectable, CD : consommation de drogues, RdR : Réduction des Risques, AC : Association Communautaire

## WEPEC115

### **Effect of a Combination of Behavioral and Biomedical HIV Prevention Interventions on High Risk Behavior among Female Sex Workers in Kampala, Uganda**

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**Background:** Over the past 3 decades, many HIV prevention interventions have been tested and implemented among different populations yet no single intervention has been found to have sufficiently high efficacy to individually control the HIV epidemic in sub-Saharan Africa. FSWs are at an increased risk of getting or transmitting HIV and other STIs.

We present an evaluation of a combination HIV prevention intervention and assess its effect on condom use, prevalence of STIs, number of sexual partners and alcohol abuse by the FSWs.

**Methods:** Data were obtained from FSWs enrolled on an HIV prevention program at Good Health for Women Project (GHWP) clinic in Kampala from January 2013 to December 2016, and followed up for 12-24 months. Data was collected on reported condom use with paying clients, number of sexual partners in the previous month and, alcohol (AUDIT tool) use at enrollment, months 12 or 24. At 3 monthly visits, women received information on HIV & STI prevention, HIV counseling and testing, behavioral risk and alcohol reduction counseling and free condoms.

A combined risk score was generated from condom use, number of sexual partners and alcohol use. We fitted a logistic regression models to determine associations between the observed changes in behavior and participant characteristics.

**Results:** 590 FSW aged 16-54 years (Median:27) participated. 56% had attained primary education, 48% did sex work as the main occupation and the HIV prevalence was 40%.

A significantly lower proportion reported using condoms inconsistently after the intervention (52% Vs 31%). Alcohol dependence reduced from 33% to 26%. Prevalence of STI syndromes reduced from 40% at enrollment to 22%. The number of women categorized as having a lower risk of HIV infection increased from 42% to 62% at follow up.

Whereas there was a general; reduction in; inconsistent condom use, prevalence of STI and alcohol use, HIV positive FSW were less likely to change behavior (AOR:0.7, 95% CI:0.48-0.98). Women who had attained at least primary level were more likely to change behavior (AOR: 1.9, 95% CI:1.06-3.64). Those working in bars/lodges, night clubs and did not self-identify as FSW were also less likely to change behavior after the intervention (AOR: 0.57, 95% CI:0.35-0.94).

**Conclusion:** Efforts to reduce the risk of HIV infection among FSWs should be directed towards HIV positives, those with low education levels, and the ones who don't self-identify as FSWs.

## **WEPEC116**

### **Prévenir la Transmission du VIH et Sensibiliser sur les Conduites à Risques (Sexuelles et Routières) des Populations Vulnérables du Transport, Camionneurs et Conducteurs de Moto-Taxi, au Cameroun**

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**Questions:** Le Cameroun fait face à une épidémie généralisée de VIH (3,7%[1]) connaissant de grandes disparités géographiques et une forte prévalence durable dans certains groupes clés/passerelles de l'épidémie dont les freins à l'accès aux soins de santé sont nombreux. Les camionneurs (CAM) et les motos taxis (CMT) font partie de ces populations mais rares sont les études les ayant ciblées. Elles sont non seulement sujettes à des conduites routières à risque, mais aussi à des conduites sexuelles les exposant aux IST/VIH. Une approche combinée des facteurs d'exposition aux risques serait elle pertinente pour mieux sensibiliser ces populations et déployer des interventions de CCC adaptées? [1]Rapport CAMPHIA 2017

**Description:** Dans le cadre du programme MOVIH/CAM, l'ONG Moto Action a élaboré des outils de sensibilisation sous forme de questionnaire (quiz d'évaluation des risques) que des pairs éducateurs ont administré à ces deux populations. Il s'agissait donc pour l'ONG, d'obtenir des informations statistiques concrètes sur les conduites à risques routières & sexuelles des CAM et des CMT et d'évaluer de manière combinée leur degré d'exposition et leur degré de connaissances des IST/VIH. La collecte a eu lieu dans les 6 villes du Cameroun de juin 2017 à mars 2018 sur un échantillon de 1200 (574 CAM et 626 CMT).

**Leçons apprises:** 29% des CAM et 33% des CMT sont fortement exposés aux IST/VIH par mauvaise connaissance (ignorance et/ou fausses croyances). 25% des CAM et 27% des CMT ont des conduites sexuelles à risque. 11% des CAM, 14% des CMT combinent les deux facteurs d'exposition. En outre, au seuil statistique de 1%, les CAM qui ne portent jamais leur ceinture de sécurité courent 2 fois plus de risque de ne pas porter de préservatif lors des rapports sexuels que ceux qui la portent toujours. Au seuil de 5%, les CMT qui ne portent jamais leur casque de sécurité ont 1,79 fois plus de risque de ne pas porter de préservatifs lors de rapports sexuels que ceux qui le portent toujours.

**Prochaines étapes:** L'administration de quiz d'évaluation combinée des facteurs de risques a permis de mener des sensibilisations individuellement ciblées sur les réels facteurs d'expositions (conduites et/ou connaissances) des cibles et de combiner, pour une meilleure assimilation, des activités de prévention des risques routiers et sexuels auprès des populations vulnérables du monde du transport. Des boîtes à images spécifiques seront déployées dans ce sens.

## **WEPEC117**

### **Hsh Handicapés Vivant en Milieu Rural, une Double Vulnérabilité dans un Contexte de Lutte Effrénée pour le Respect des Droits Humains**

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Au Sénégal, l'épidémie du VIH est concentrée chez les groupes les plus exposés au risque de transmission (prévalence : Hommes ayant des rapports Sexuels avec Hommes HSH 27%, travailleurs de sexe TS 06% contre 1,9% Personnes Handicapées PH). Depuis 2010, les PH sont une priorité en matière de développement et, spécifiquement, dans la réponse au VIH. Cependant, la réponse aux besoins des PH reste encore insuffisante. La question des populations clé rarement évoquée dans le cadre de la prise en charge des PH, prend de plus en plus d'ampleur au sein de cette catégorie. C'est dans ce contexte qu'une étude est menée pour contrôler d'abord la qualité des interventions puis caractériser les comportements et les pratiques au sein des PH.

**Méthodes:** Un total de 3435 personnes handicapées a bénéficié des interventions de l'Alliance Nationale des Communautés pour la Santé (ANCS) durant l'année 2017 au Sénégal. Une étude de sondage a été menée auprès d'un échantillon de 1500 de ces bénéficiaires dont 93 HSH dans les 3 régions du sud. A travers un questionnaire conçu à partir le logiciel ODK, des informations ont été recueillies concernant leurs caractéristiques socio-démographiques, leur niveau de connaissance du VIH/Sida et leur perception des interventions réalisées.

**Résultats:** Les résultats présentent un niveau de connaissance du VIH de 67% avec des disparités selon le niveau d'étude, et surtout le type de handicap. En effet, on a noté une réelle difficulté de restitution des connaissances acquises chez les personnes atteintes de surdité et de mutité; cette difficulté est due aussi bien par le handicap de la personne que par le canal de communication utilisé; Idem pour les 92% des personnes déficientes mentales. 96% des HSH handicapés affirment avoir vécu une marginalisation à plusieurs niveaux : problème d'accès aux soins surtout spécifiques aux HSH, stigmatisation dans le milieu HSH et finalement ils ne bénéficient pas des paquets de services complets, faible inclusion dans les activités familiales et sociales.

**Conclusions:** Les interventions auprès des handicapés ont amélioré leur niveau de connaissance sur le VIH/SIDA et ont participé à un changement positif de comportement malgré que les outils de communication méritent d'être adaptés aux capacités et aux aptitudes des PH. La communication doit intégrer aussi les associations pour mieux les sensibiliser contre la stigmatisation des HSH en leur sein et une protection sociale et sanitaire.

## **WEPEC118**

### **An Evaluation of HIV Prevention Intervention: Brotha2Brotha(B2B) Model in Harare (2017-2018) by a Muzondiona**

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**Background:** The advent of new HIV infections among young women and girls has seen UNFPA and partners coming up with a SISTA 2 SISTA Model focusing on vulnerable young women and girls. However this created a gap as it left out the other side of the coin. The boy child is equally in need of the HIV/AIDS and related services. The B2B Programme is designed to promote HIV prevention among young boys and adolescents. Three groups of young men aged 15-24 years were recruited into the B2B in the districts of Harare namely Mbare, Chitungwiza and Hatfield. The focus of the programme was on HIV prevention, ASRH and life skills training for young vulnerable young men. The young men were taught on HIV prevention and motivated to take up prevention services like HTS, VMMC and condom services among others. Soccer was used as edutainment to recruit youths into the clubs and generate demand for service uptake.

**Objectives:** To describe the processes of B2B programme implementation

To determine the impact of B2B model on HIV prevention services uptake by youths

To assess the impact of the programme on sexual and social behaviours of the youths

**Methods:** The evaluation employed an analytical cross sectional study. Self-administered questionnaires were administered to the participants. The inclusion criteria was to interview youths aged 15-24 years at baseline and those who had benefited from the programme during its implementation.

**Results:** Among the 300 questionnaires answered (90% response rate) and analysed, mean age was 19 years. 85% of the participants reported to have utilized the HIV prevention and the Adolescent Reproductive and Sexual Health (ARSH) knowledge which they acquired to empower themselves. There was significant increase on uptake of VMMC and HTS service uptake among the youths ( $p < 0.001$ ). And 62% of the boys sampled in Chitungwiza district were circumcised after exposure to the programme. The level of drug and substance abuse among the youths in the communities of Hatfield and Mbare declined by 20%. Income generating projects like gardening, welding, car wash among others were embraced by most youths.

**Conclusion and Recommendations:** The evaluation analysis illustrated the B2 B model is effective in promoting HIV prevention and uptake of services among boys. The B2B can be used as a tool to generate demand and disseminate comprehensive HIV and ARSH information for vulnerable youths and adolescents.

## **WEPEC119**

### **Capacity Building of Female Sex Workers (FSWs) on Viral Prevention Literacy, Paramount to Change the Narrative of HIV and Hepatitis B Prevention and Treatment in Calabar, Cross River State, Nigeria**

Nya Ifiok

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**Background:** Hepatitis B is a Sexually Transmitted Infection (STIs) that is caused by Hepatitis B Virus. Hepatitis B is a common liver infection with similar mode of transmission with HIV/AIDS. Hepatitis B affects more than 2 billion people globally, 75 million people in Africa and 20 million people in Nigeria. The objective of the study was to assess the awareness of Hepatitis B among brothel Female Sex Workers (FSW) aged 15-49 years, in Calabar, Cross River State, Nigeria

**Methods:** The study was community-based, employing both qualitative and quantitative data collection methods. 168 structured questionnaires were administered alongside 10 in-depth interviews. In-depth interview data were analyzed by grouping discussants views including verbatim quotation thematically. Quantitative data were analysed using the Statistical Package for Social Science (SPSS).

**Results:** 158 (94.0%) respondents were not aware of Hepatitis B infection. About 141(83.9%) respondents accepted to have experienced condom breakage during sexual intercourse with their clients and few respondents 12 (7.1%) agreed to practice unprotected sex when offered huge amount of money. The prevention strategies of respondents after condom breakage was poor. 135 (80%) respondents said they took Beecham ampiclox to prevent viral infections while 92 (54.8%) wash their private part with water and soap. 81(48.2%) took herbal medicine, 71(42.3%) took hot drinks while 48 (28.6%) urinate to evacuate deposited semen inside them. Surprisingly, 40 (23.8%) drank salt and water.

A respondent in an in-depth interview said: "After I do finish with my customer, I dey take herbal medicine like Dr. Iguedokoko cleanser, hot drink, or original beecham ampiclox and the medicine dey clean everything commot for my body".

Most respondents 164 (97.6%) admitted that there is a poor level of awareness on proper prevention of viral infections which invariably resorted them to taking what their peers advise. The entire respondents showed interest in purchasing HIV preventive drugs if available.

**Conclusions and Recommendations:** The low literacy on viral prevention among FSWs predisposes them to Hepatitis B and HIV/AIDS. It is therefore critical for urgent intervention to address this gap. There is need to create community awareness on existing and new prevention tools for HIV/AIDS. It is imperative to also put systems in place to ensure Hepatitis B vaccines are easily accessible to these groups to reduce their susceptibility.



## WEPEC120

### Drug Use and Vulnerability to HIV and STI Prevalence among Female Sex Workers: Evidence from the Ghana Integrated Bio-behavioral Sentinel Survey

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**Background:** Opinions about the role of drug use (DU) in increasing HIV and STI vulnerability among female sex workers (FSWs) are widely held and have influenced approaches to HIV prevention. However, recent studies on the association between DU and HIV and STI infection have yielded conflicting results. We examined the difference in vulnerability to HIV and STI infection among DUs and non-DUs FSWs in Ghana

**Methods:** We used the 2015 national bio-behavioral surveillance survey data with a sample of 4072 FSWs. DU was measured by two items: "have you ever used illegal drugs and have you used injection drugs within the last 12 months (yes/no). We used Pearson's Chi-square to test associations between the socio-demographic characteristics of FSWs and DU and HIV and STI status. A multivariate logistic regression model accounting for HIV and STI status and DU and also controlling for selected socio-demographic factors was fitted to predict DU and HIV/STI status

**Results:** About 25% of FSWs reported DU (FSW-DU). Common drugs used included cocaine, heroin, glue, marijuana, pethidine, and valium. Among the 1023 DUs, 34 (3.3%) were persons who inject drugs (PWID). Comparatively FSWs who used drugs were significantly likely to be younger (< 25years), non-Ghanaian and have been in sex work for more than 10 years. FSW who were 25years and above (aOR=0.57, CI:0.36 - 0.90), had served 10 or more clients (aOR=1.56, CI:1.15 - 2.10) in the past one week and a seater (operates from home or brothel) (aOR=1.58, CI:1.12 - 2.24) were the factors found to be significantly associated with DU among FSWs. There was no statistically significant difference between FSW-DUs and non-DUs in terms of HIV, Syphilis and HBV.

**Conclusions and Recommendations:** Contrary to the often held notion that the association between DU, FSW and HIV and STI vulnerability is evident, this study found no difference in the vulnerability to HIV and STI prevalence between DUs and non-DUs- FSWs. The findings of this study lends support to the growing recognition of the importance of contextual factors in increasing HIV and STI vulnerability in recent studies. HIV prevention interventions should not just target individual-level factors but also structural factors such as gender based violence and stigma that shape individual level risk behaviors. It is also instructive to note that 3.3 percent of DUs were PWIDs, which warrants the introduction of more nuanced interventions and further studies on FSWs-DU in Ghana.

## WEPEC122

### 'When You Are High... You Won't Have the Time to Think of Using Condom': A Qualitative Exploration of Substance Use and Sexual Risk Behavior among Key Populations who Use Substances in Lagos Nigeria

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**Background:** Key populations (KPs) contribute disproportionately to the HIV epidemic in Nigeria. KPs who use substances engage in risky behaviors that may play a coactive role in HIV transmission and acquisition. This qualitative study explored the relationship between substance use and sexual risk behavior among KPs who use substances.

**Methods:** Sexually active men who have sex with men [MSM] and female sex workers [FSWs] aged 16 years and older who used substances in the past 6 months were purposively selected to participate in 16 in-depth interviews (IDIs) and 2 focus groups (FGD) in December 2018. The IDIs/FGDs explored the relationship between substance use and sexual partners/practice as well as implications for HIV risk. The interviews were audio-recorded, transcribed, organized in NVIVO 11 and analyzed using thematic analysis.

**Results:** A total of 19 FSWs and 18 MSM participated in the IDI/FGD. Majority (95%) were non-injection substance users who used cannabis, alcohol, codeine, tramadol and rohypnol; a few MSM also used cocaine and heroin. FSW were inclined to use substances as a coping strategy for the physical and emotional pressures experienced in working long hours. MSM used substances to boost self-esteem and cope with stressful sexual relationships; receptive MSM also did so to reduce pain and increase the pleasure of the sexual experience. There was a consensus among KPs that the use of substances prior to sex reduced risk perception, their capacity to negotiate condom use, increased risk taking and their vulnerability to violence or rape. Some MSM reported engaging in sexual practices such as double penetration, group, condomless anal and intergenerational sex only after substance use. Strategies employed to reduce STI/HIV risk included asking partners prior to condomless sex for recent HIV test results, alerting friends to rescue them from a violent sexual encounter if their judgement was clouded and the use of antibiotics after unprotected sex (FSWs).

**Conclusions and Recommendations:** Findings indicate that KPs were more inclined to engage in high risk sexual practices after the use of substances potentially increasing HIV risk. The behavioral disinhibition effects of substances should be considered in the design of targeted KP HIV prevention programs. HIV programs in Nigeria may yield better outcomes if they address the nexus of sexual risk behavior and substance use as well as knowledge and appropriate use of HIV prophylaxis.

## WEPEC123

### Sexual and Mental Health of Transgender Persons in Nairobi, Kenya

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**Issues:** Transgender persons (TP) are disproportionately affected by HIV, common mental & substance use disorders, violence and victimisation, however evidence is very limited from sub-Saharan Africa. In the absence of a specific response, TP are encountered in research and services directed to gay, bisexual and other men who have sex with men (GBMSM).

**Descriptions:** The TRANSFORM study enrolled TP and GBMSM in Nairobi via respondent-driven sampling in 2017. Eligibility criteria: age 18+, male gender at birth/currently, Nairobi residence and consensual oral or anal intercourse with a man during the last year. Participants completed a computer-assisted survey including HIV/STI testing and treatment history, PHQ9, AUDIT and question about recent experience of discrimination and violence. Gender identity was elicited using a piloted two-step method. Participants tested for HIV and anogenital STIs (Xpert® CTNG urine and rectal). Frequency measures were weighted using the RDS-II method; measures of association were unweighted and adjusted for sociodemographic confounders

**Lessons learned:** Among 618 recruits, 522 (84.5%) identified as cisgender GBMSM (cisGBMSM), 86 (13.9%) trans-feminine and 4 (0.7%) trans-masculine (6 missing). Compared to cisGBMSM, trans-feminine and trans-masculine (TP) participants were similar in age, education level, employment and country of birth. TP were more likely than cisGBMSM to be HIV positive (39.9 v 24.6%: aOR 2.0 (1.2-3.3)  $p=0.007$ ), have rectal NG (23.6 v 11.8%: aOR 2.4 (1.3-4.3)  $p=0.005$ ); and to have current symptoms suggestive of rectal STI: 18.6 v 7.0%: aOR 2.4 (1.2-4.9)  $p=0.015$ . Among HIV positive participants, 90-90 indicators were weaker for TG (63-81-82) than cisgender GBMSM (73-84-83) but differences were not statistically significant ( $p=0.333$ ). 24.0% TP recorded PHQ9 scores of 10+ (moderate-severe depression, vs 16.4% cisGBMSM, aOR 1.8 (1.0-3.1)  $p=0.047$ ). 14.8% TP had AUDIT scores of 9+ indicative of harmful alcohol use (vs 9.2% cisGBMSM, aOR 2.0 (1.0-3.8)  $p=0.044$ ).

**Next steps:** TP in Nairobi have distinctly higher burdens of STIs, depression and harmful alcohol use than cisGBMSM, and are more frequently targets of discrimination and violence. Providers should reconsider the appropriateness of existing prevention and service models that may fail to distinguish between sexual and gender diversity of users. Future research should be designed to focus specifically on the health needs of TP in this setting.

## **WEPEC124**

### **We Are All in This Together: The Role of Community-based Organizations in Reducing New HIV Infections among Black Men Who Have Sex with Men**

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**Issues:** Black men who have sex with men are disproportionately affected by HIV/AIDS. There is a growing recognition that a singular focus on biomedical treatments is insufficient to address the HIV epidemic among Black men who have sex with men (BMSM). Culturally appropriate HIV prevention interventions implemented by community-based organizations that explicitly acknowledge the social determinants of health, particularly stigma and discrimination, both racial and sexual, are critical to reducing the number of new infections.

**Descriptions:** Utilizing qualitative and quantitative data from the ViiV ACCELERATE! Initiative, we present findings from five (5) community based organizations who developed and implemented innovative HIV prevention interventions targeting Black MSM (n=200). The interventions focused on four domains:

1. **Boosting empowerment and strengthening networks**
2. **Making sex education relevant,**
3. **Making testing a bridge to prevention, care and treatment**
4. **Strengthening navigation services**

#### **Lessons learned:**

- Through partnership with HIV clinics and other social services, CBOs may expand their reach for linkage and retention in care.
- CBOs with in-house clinical services are more successful in recruiting and retaining patients in care.
- Cultural competence and tailored services were identified as key to client engagement
- Participants indicate an increase in awareness of HIV prevention, care and treatment resources (e.g. HIV testing and PrEP), increased linkage and retention in care, reduction in sexual risk behaviors and increase positivity through boosting empowerment and a reduction in isolation and stigma.

**Next steps:** These culturally-appropriate and locally-derived HIV prevention interventions provide a model for HIV health care providers, public health officials, and community based organizations to address the unique needs of BMSMs. We plan to publish findings from this study to increase recognition of the importance of the role of community based organizations in reducing the number of new infections among racial/ethnic and sexual minorities. In addition, we will partner with grantees from this initiative to develop a HIV prevention intervention workshop/manual for community based organizations and healthcare providers who may be interested in replicating similar activities in their communities.

## **WEPEC125**

### **Sexual Practices among Adolescent Girls in Secondary Schools in Uganda**

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**Background:** Adolescent girls are faced with numerous sexual and reproductive health challenges that expose them to risky sexual behaviors that lead them to teenage pregnancy, acquisition of sexually transmitted infections including HIV and AID and school dropout yet current HIV prevention approaches mainly focus on adolescent girls out of school. This study examined sexual practices of adolescent girls in secondary schools aged 15 and above in Wakiso District, Uganda.

**Method:** Using cross sectional design, 242 girls aged 15 -19 years attending secondary school education in 2 selected mixed-sex (boys and girls) schools responded to a questionnaire on sexual behavior. All the schools had both day and boarding sections and were located in Semi-urban areas within the district in Uganda. Descriptive analysis was done using SPSS version 20.

**Results:** A total of 242 girls responded participated in the study, 60% (146) were aged 15-17 years while 40% (96) were aged 18-19 years. 72% were in form five and majority were predominantly catholic (35.1%), Anglican (28.9%) and Pentecostal (28.5%). 35.5% of the girls reported to ever having sexual intercourse prior to the study, with majority (53.7%) having the first encounter between the age of 15 and 19 years while 46.3% before the age of 14 years. Interestingly, 26.8% had had their first sexual encounter with males aged 15 and above while 35.5% didn't know the ages of the first sexual partners. This study revealed that there is generally low condom use among adolescent girls with only 2.9% of the sexually active girls reporting to use condoms at each sexual encounter.

**Conclusion and recommendations:** It is evident that the girls in school are highly sexually active especially after the age of 14 year many years after the implementation of the sexual education in schools in Uganda. Although 62% of the girls reported to having access to a health facility near or within school, there is low condom use and high sexual activity among school girls which exposes them to HIV infection. High risk factors were associated with unavailability of adolescent SRH services, peer influence and the person staying with the girls at home.

The high rates of sexual activity among adolescent girls urgently need targeted in-school behavioral change interventions and improved access to adolescent sexual and reproductive health services in order to reduce the risk of HIV.

## WEPEC127

### An Assessment of Client Socio-Economic Determinants That Affect Retention in HIV Care Program in Malawi: A Case of Kawale Health Centre-Malawi

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**Background:** Malawi has high burden of HIV currently at 10.5 % prevalence. Treatment success with antiretroviral therapy is dependent on adherence of the patients to treatment and being retained in care for life which is not the case in reality. For example, around 29% of patients being lost to follow up by 24 months in prevention of mother to child transmission care in Malawi. The objective was to assess the socio-demographic characteristic which have an impact on retention and how these characteristics affect the retention. Secondly the study aimed at assessing the major reasons for being lost to follow-up.

**Methods:** A retrospective cross sectional study in which participant's socio-demographic factors data was collected and compared with the lost to follow up outcomes. A structured questionnaire was administered to assess if participants had ever missed therapy for more than two weeks in the last one year. Secondly participants who had recently been lost to follow-up and brought back to care were interviewed on why they decided to default treatment. Data analyzed using SPSS data base.

**Results:** Population was 44.8 % ( 139/285) females and 51.2 % ( 146/285) males, mean age was 30 years. Multivariate analysis showed, education ( $p < 0.0001$ ), marital status ( $p \text{ value} = 0.011$ ), employment status ( $p \text{ value} = 0.034$ ) and age ( $p \text{ value} = 0.001$ ) had a significant impact.

Having no or only primary education had 2.5 times (OR=2.5747, CL, 1.2377 - 5.356,  $P = 0.0114$ ) . No statistically significant difference between primary and tertiary education ( $P = 0.0938$ ) . Within marital status, the divorced patients had 2.5 times risk than the married (OR=2.5, CL, 1.2377 - 5.356,  $P = 0.0114$ ). Comparing with singles, the divorced had 2.4 times risk than the singles (OR=2.4789, CL, 1.1268 to 5.4534,  $P = 0.0240$ ) . Those with no employment had 1.6 times risk than those in formal employment (OR=1.6, CL, 1.0192 - 2.5477,  $P = 0.0412$ ) and no statistically significant difference with self employed ( $p = 0.2354$ ).

Poor health worker attitude (30.3%), partner influence (21.1%), and moving to other locations (12.1 %) were main reasons for being lost.

**Conclusions and Recommendations:** Health workers and health systems need to assess marital, employment and education status of clients and target those with divorced, no job and low education status with intervention to reduce defaulters. Improved health worker attitude and couple counselling and testing need to be encouraged in order to reduce attrition of clients in care

## WEPEC128

### Determinants of Viral Suppression among Children, Adolescents, and Adults Accessing HIV Care in Selected Health Facilities in Southern Malawi

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**Background:** This study was conducted to identify factors associated with viral load suppression (VLS) to address service gaps and treatment outcomes among people living with HIV in southern Malawi.

**Methods:** From July to August 2018, a cross-sectional study was conducted in 44 Elizabeth Glaser Pediatrics AIDS Foundation supported facilities that utilize paper-based patient records systems in four districts. For clients currently active on ART for at least 6 months data were collected through patient medical records and viral load (VL) register abstractions to evaluate VLS, defined as VL < 1000 copies/ml. The independent variables of interest included demographic, clinical, and facility characteristics. We used logistic regression modelling to evaluate factors associated with VLS adjusting for duration on ART.

**Results:** Of the 26,031 client records included in the study, 19,250 (74.0%) had documented completion of a VL test ever in the master card of which 16,116 (83.7%) had a result recorded, and of those, 15,018 (93.2%) were suppressed. Patients aged 20-24 years [aOR=2.53 (95% CI: 1.49-4.31)], 25-34 years [aOR=2.28 (95% CI: 1.49-4.31)], and 35 and above years [aOR=3.90 (95% CI: 2.60-5.85)] were more likely to have VLS compared to children 0 to 9 years (VLS=70.4%). Patients on tenofovir disoproxil fumarate (TDF)-based ART regimens were more likely to be virally suppressed, compared to those on zidovudine-based ART regimens [aOR 2.69 (95% CI: 1.39-5.18)]. Patients on ART regimen with atazanavir were less likely to be suppressed [aOR=0.10 (95% CI: 0.06-0.18)] compared to nevirapine containing regimens. Clients in urban facilities were less likely to be virally suppressed than those in rural facilities [aOR= 0.37 (95% CI: 0.28, 0.50)], while clients in district hospitals were more likely to be virally suppressed than community level Ministry of Health facilities [aOR=1.65 (95% CI: 1.21, 2.24)].

**Conclusions and Recommendations:** Our findings indicate the critical need for increased focus on strategies to improve VLS among children living with HIV, to scale-up more effective ART regimens, and to target support to facilities with identified gaps in patient VLS outcomes. Recommended interventions include intensive adherence counselling and specific pediatric clinic days, TDF scale-up and targeting urban and community-based facilities for capacity building on ART sequencing, adherence counselling and VL monitoring.

## WEPEC129

### Disclosure of HIV-positive Status in the Department of Infectious Diseases of Point-G Teaching Hospital: Current Data and Determinants

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**Background:** The non-disclosure of HIV-positive status to sexual partners, family members, or others in the social circle of HIV-positive patients remains a real problem in developing countries. It is suspected to hamper HIV prevention and treatment efforts. This study focused on its magnitude and determinants

**Methods:** This study was prospective and included HIV-positive patients under antiretroviral treatment and followed up in the Department of Infectious Disease of Point-G Teaching Hospital. These patients were interviewed between May and August, 2018. A case report form was filed by one medical student during individual and confidential interview. Data were enter and analyzed with SPSS 20.0 software. Chi square, Fischer exact and Mann Whitney Utests were used (according to convenience) to study factors influencing the disclosure of HIV status, with a threshold of  $p \leq 0.05$  for signification.

**Results:** a total of 302 patients infected by HIV were interviewed. They were predominantly female (sex ratio = 2.4) with a mean age of  $42.8 \pm 10$ , 5 years (minimum: 20; maximum: 71). The majority of them were unschooled (35.1%), married (58.6%), and residing in Bamako ( 83%). Of the 302 patients, 73.2% disclosed their status to at least one person in their social network and mostly to their regular sexual partner (s) (47.6%). The disclosure was motivated by the sense of duty (27.1%), the willingness to push the informed person to screen for HIV (19.4%) and the desire to thanks the informed person for his support (12.5%). The non-disclosure was motivated by the fear of stigma and discrimination (30, 3%), the non-perception of the benefits associated to disclosure when patients are under treatment (24, 2%) and the lack of trust to others (18, 2%). The factors that were associated to disclosure were the marital status of the patient, the positive reaction of the informed person after the disclosure and the time elapsed after knowing the HIV-positive status.

**Conclusions and recommendations:** This study provide a better understanding of the magnitude of disclosure and non-disclosure of HIV status among the HIV-positive patients under antiretroviral treatment the motivation to disclose or not, and the factors associated to disclosure. They could help in designing interventions to promote disclosure among HIV-positive patients. Such interventions might help limit the spread of HIV in the general population.



## **WEPEC130**

### **A Gendered Lens to the Cultural Structures; Empowering Vulnerable Widows on Their Land Rights**

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**Issues:** In Kenya there is no full recognition of poor women's and children's equal rights to access inherit and own property in legal frameworks, there is high violations of rights of widows and orphans since they are not empowered to know and recognize these rights and strategically confront their violations by seeking redress. There is a need to address the inability of poor widows and orphans to access formal justice by advocating for the operationalization of Article 159(2) by the State. The inability of women to secure access to land has resulted to various forms of violations. In Homabay and Kisumu Counties, widows are subjected to the practice of *widow cleansing* and *widow inheritance* as a form of traditional practice upon the death of their spouses. This practice has overtime evolved and sexualized thus putting the health rights of the women at risk. These two counties are among the top three Counties in Kenya with the highest HIV prevalence. The practice subjects the widows to the danger of HIV/AIDS infection because of the manner on which the tradition is implemented. When the women refuse to be *inherited* they are chased away from their matrimonial homes, their houses are destroyed and all their properties are taken away. These women resort to living in the nearest market centres where they are likely to resort to risky behaviors that exposes them to even further risks of infection.

KELIN works with the cultural structures to resolve disputes between the widows and their in laws through traditional resolution mechanism to ensure the women are resettled back to their homes and their land and properties restored. Disinheritance of widows adversely affects the rights of the orphans and vulnerable children. A total of 700 cases have been resolved so far.

**Descriptions:** We have trained 50 traditional elders on women's property rights and 80 widows and 300 orphans on how to seek support in cases of land and property disputes. The trainings were supplemented community dialogues where community members shared their experiences in using traditional institutions to resolve land disputes.

**Lessons learnt:** There is need for advocacy on the elders' formal registration within the sub county courts as a step towards formal recognition.

**Next steps:** Development of a training curriculum focusing on household level interventions to promoting widow's health related human rights.

## **WEPEC132**

### **Assessment of Food Insecurity and Vulnerability of HIV Affected Households in Ghana. Quantitative Evidence from the Central, Eastern, Northern and Brong Ahafo Regions of Ghana** Ankrah Eunice<sup>1</sup>, Larbi Emmanuel<sup>2</sup>, Lamptey Jewel<sup>3</sup>

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**Background:** Food insecurity and HIV/AIDS are intertwined in a vicious cycle that heightens vulnerability to, and worsens the severity of, each condition. Food insecurity is a major hindrance to adherence to antiretroviral treatment, leading to negative coping strategies and increased risk of exposure.

**Methods:** The survey assessed food insecurity and vulnerability status of HIV-affected households in Central, Eastern, Northern and Brong Ahafo regions of Ghana. A cross-sectional design using solely quantitative data collection techniques was adopted. A univariate analysis was used to generate descriptive tabulations for key variables. Two-sided test of statistical significance was performed with significant level of 0.05.

Food security and vulnerability to food insecurity were measured using Coping Strategy Index (CSI) and the Food Consumption Score (FCS). Households were grouped into four categories according to the degree of vulnerability to food insecurity through the use of a statistical technique called the Interactive Cluster Analysis Procedure (ICAP). The categories were "worst off", "vulnerable" "acceptable" "better off".

**Results:** Out of the 1,666 people living with HIV (PLHIV) on ART sampled, 21% were found to be food insecure. Extrapolations based on the entire number of PLHIV on ART in the focus regions (36,586) showed that 7,778 PLHIV are food insecure. Food insecurity was found to higher in male headed households (54%) than in female headed households (46%).

Various coping strategies instituted by the HIV-affected households ranged from limiting portion sizes at mealtimes (61.9%), reducing number of meals eaten per day (59.9%), relying on less expensive or less preferred foods (57.6%), to harvesting immature crops, to begging (5.7%).

With the extent of vulnerability, overall, over 50% of the households 1,666 households sampled fall into most vulnerable category (worst off) and vulnerable. 8.9% who were worst off translates that 3,257 of the total 36,586 PLHIV on ART in the four focus regions require immediate targeting for assistance.

**Conclusions and Recommendations:** To reduce risk and vulnerability as a result of food insecurity through appropriate safety nets, policy objectives should target policy objective target both the vulnerable and worst off so as to prevent them (the vulnerable) from slipping into the worst-off group.

## WEPEC133

### Mathématique et VIH/Sida: Un Modèle Mathématique de Propagation et de Contrôle pour son Éradication en RD Congo

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**Background:** La RD Congo connaît une épidémie à VIH de type généralisé avec une prévalence à 1,2% dans la population générale. Le pays a souscrit à plusieurs engagements parmi lesquels l'atteinte des objectifs 90-90-90 et 95-95-95 qui stipulent respectivement le contrôle de l'épidémie en 2020 et la fin de celle-ci en 2030.

De ce fait, les outils mathématiques s'avèrent très importants dans la recherche des politiques de contrôle et de l'éradication de l'épidémie qui réduit sensiblement le seuil épidémique  $R_0$ , et de ce fait le temps jusqu'à l'éradication de celle-ci. Les objectifs spécifiques sont:

1. Traduire mathématiquement l'épidémie, l'analyser, proposer des politiques multi-sectorielles d'éradication qui réduit sensiblement  $R_0$ .
2. Prédire mathématiquement la fin de l'épidémie en RDC.
3. Identifier les différents piliers sur lesquels agir pour obtenir l'élimination de l'épidémie.

**Methods:** Après la revue documentaire et la collecte des données chez PNMLS, nous avons procédé à l'analyse compartimentale qui fait appel à des équations différentielles pour mettre en place le modèle.

**Résultats:** La population a été subdivisée en six compartiments homogènes. Les compartiments S des susceptibles;  $I_N$  des individus récemment infectés ignorant leurs statuts;  $I_C$  des infectés connaissant leurs statuts;  $I_{TV}$  des individus sous traitement ARV;  $M_{CS}$  des individus ayant la charge virale supprimée et  $I_{pa}$  les individus ayant abandonnés le traitement et le calcul à l'aide des données PNMLS et des paramètres (comme par exemple: efficacité du préservatif = 85% et l'utilisation du préservatif = 50%) a montré que  $R_0 = 1.31$ ; témoignant ainsi l'endémicité du VIH/sida en RDC et cela aussi longtemps que PNMLS ne changera pas sa politique d'intervention. Nous avons ensuite proposé d'autres politiques qui chacune à réduit  $R_0$  par rapport au précédent et ainsi a réduit le temps jusqu'à son élimination. Nous avons finalement nommé "*Haut niveau de stratégie nationale*", la politique qui nous a donné  $R_0 = 0.00034$  et nous rassure de l'éradication du VIH/sida à l'horizon 2030 en RDC.

**Conclusions and Recommendations:** Pour une bonne lutte contre le VIH/sida, une interdisciplinarité s'avère très importante associant les mathématiciens pouvant traduire la propagation du VIH/sida à des outils mathématiques et ainsi comprendre, expliquer, contrôler et prédire dans la mesure du possible cette épidémie.

## **WEPEC134**

### **Effect of Test and Treat on Retention, LTFU, Death and Transfers among PLHIV at TASO Uganda. A Multi-site Retrospective Study**

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**Background:** Despite reduction in mortality following universal test and treat (UTT) among people living with HIV (PLHIV), few studies have analyzed the effect of UTT on retention, loss to follow up (LTFU), external transfers and death accounting for multiple site differences and other factors in sub-Saharan Africa. We compared these outcomes between PLHIV receiving care from 11 TASO Centers of Excellence in Uganda before and after UTT while adjusting for baseline factors.

**Methods:** Two cohorts of PLHIV enrolled before (2013-2015) and after (2016-2018) UTT receiving care were considered and followed for a maximum of 3 years. The after UTT cohort included only those started on treatment within 30 days of testing positive. The primary outcome was retention, and LTFU, external transfer and death were considered secondary. We used Kaplan Meier estimates to compare these outcomes between the two cohorts and Gompertz model to analyze the effect of UTT on each outcome while adjusting for source of care and baseline factors.

**Results:** Of the 43,011 PLHIV registered between 2013 and 2018, 49.4% were enrolled during UTT period of whom 77.7% were tested and started on treatment. Overall, UTT was associated with lower hazards for non-retention (adjusted hazard ratio, aHR: 0.76, 95% CI: 0.65 - 0.89), LTFU (aHR: 0.88, 95% CI: 0.75 - 1.05), death (aHR: 0.02, 95% CI: 0.01 - 0.04), and external transfer (aHR: 0.08, 95% CI: 0.05 - 0.13). However, there was variation in effect of UTT on retention and LTFU between TASO centers. For example, the hazard for non-retention was highest in Tororo (aHR: 1.58, 95% CI: 1.29 - 1.94) and lowest in Mbarara (aHR: 0.73, 95% CI: 0.58 - 0.92) as compared to Entebbe. Also, the hazards for non-retention and LTFU were higher among males, those in cohabiting relationships, separated, divorced, widowed and the never married compared to those in monogamous marriage; lower among adults aged  $\geq 25$  years compared to adolescents aged 15-19 years; and lower among the employed.

**Conclusions and recommendations:** Universal Test and Treat improved retention resulting from reduced LTFU, deaths and external transfer among PLHIV receiving care at TASO Uganda. However, retention and LTFU worsened after UTT in some care centers. We recommend innovative interventions geared towards achieving high retention at all levels of care, and in males and adolescents in order to achieve the UNAIDS 2030 target of 95-95-95.

## **WEPEC135**

### **Caractéristiques Socio Démographiques, Cliniques et Biologiques des PVVIH Inclus dans la File Active VIH de l'Association Burkinabè pour le Bien Être Familial (ABBEF), Ouagadougou de 2017 à 2019**

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**Description du problème:** L'ABBEF a pour mission d'assurer, le leadership dans la promotion des droits et l'offre de services de qualité en santé sexuelle et reproductive pour l'épanouissement des populations en général et des groupes vulnérables en particulier. La prise en charge médicale des personnes vivant avec le VIH (PVVIH) fait partie du paquet d'activité de la structure et l'effectif des PVVIH suivi à la date du 30 juin 2019 est 154. La structure continue d'enregistrer de nouveaux patients dépistés positifs au VIH. L'analyse du profil des nouvelles inclusions est importante pour l'atteinte des trois 90.

**Questions:** Quels sont les caractéristiques socio démographiques, cliniques et biologiques des patients enregistrés au niveau de la file active VIH de l'ABBEF

**Méthodologie:** Il s'agit d'une étude descriptive transversale dont la collecte des données a été faite à partir de la revue des dossiers médicaux des patients qui ont été enregistrés du 1er juillet 2017 au 30 juin 2019.

**Résultats:** Au total, 34 patients ont été enregistrés au cours de la période d'étude, dont 94% résident à Ouagadougou. Les femmes représentent 85% des patients. L'âge moyen des patients est de 36 ans (extrême de 18 à 60 ans). Les patients mariés constituent 50% de l'échantillon et les ceux qui vivent en concubinage 26%. Pour la profession, les ménagères représentent 41% de la population d'étude et les commerçants 26%. Les circonstances de découverte de la maladie sont: le dépistage volontaire, le diagnostic et la PTME respectivement chez 39%, 32% et 29%. Le VIH 1 est retrouvé chez 97% des patients. Les patients asymptomatiques (stade clinique OMS 1) constituent 53% de l'échantillon et les proportions des patients symptomatiques sont de 26%, 18% et 3% respectivement pour les stades 2; 3 et 4. Le taux moyen de lymphocytes CD4 mesuré est de 322 cell/mm<sup>3</sup> (extrêmes de 7 à 620). Tous les patients enregistrés ont été mis sous traitement antirétroviral dont 85% sous le protocole TDF/FTC/EFV. Le dépistage des PVVIH est tardif chez plus de la moitié des personnes enregistrés et plus de la moitié des patients vivent en couple. La majorité des patients dépistés sont des adultes de plus de 30 ans. La PTME participe efficacement à l'atteinte du premier 90. Les ARV sont disponibles pour tous les patients dépistés. L'accent doit être mis sur l'observance au traitement ARV et la disponibilité de la mesure de la charge virale pour l'atteinte du troisième 90.

**Mots clé:** ABBEF, VIH-sida, suivi, trois 90

## WEPEC136

### **Socio-Demographic Characteristics and HIV-exposure Risk Profile of Newly Identified HIV Cases, within HIV Active Case Based Surveillance in Rwanda**

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**Background:** Rwanda has been working towards achieving the UNAIDS 2020, HIV 90-90-90 targets to end the AIDS Epidemic. Achieving this goal requires new HTS Strategies to identify undiagnosed cases of People Living with HIV (PLHIV). We used data from the HIV Active Case Based Surveillance (CBS), which includes active finding of cases, linkage to care and longitudinal follow up of HIV+ cases. Here, we describe the socio-demographic characteristics and HIV-exposure risk profile of newly identified HIV Cases enrolled in CBS during the period, October 2018 to June 2019.

**Methods:** Since October 2018, the active CBS has been implemented in 23 Health facilities out of 45 in Kigali City. Patients provided an informed consent/assent to participate in the program. Health care providers completed a confidential case report form for each patient enrolled. The data were collected manually on paper forms and entered in DHIS2 electronic system.

**Results:** Among 2598 index cases enrolled, 828 were newly identified HIV+ cases of whom 59.5% were females, and these 40.5% and 27.7% were in the age range 25-34 and 35-44 respectively. Females were 0.2%, 21.5%, 45.1%, 23.2% and 10.0% in the age group < 15, 15-24, 25-34, 35-44 and 45+, respectively and male were 3.1%, 38.7%, 34.4%, 23.8% in the age group 15-24, 25-34, 35-44 and 45+, respectively. Living with a partner (married or cohabitating) among newly identified HIV+ cases represented 57.0%, having multiple sexual partners was reported by 42.1%, 18.7% had sex with a known HIV+ person, 12.0% had sex with commercial sex worker, 6.0% had been commercial sex workers, 3.0% self-reported having had sex with injecting drug users, and 2.2% had perinatal exposure. Having sex with a male was reported by 10.8% of males (MSM), 3.4% of females have had sex with their fellow females (FSF), 6.1% females and 15.5% males had sex with commercial sex workers, 9.0% females and 2.5% males have been commercial sex workers. Of the 3844 total sexual partners elicited, 31.9% were in casual sexual partnership with the index case, 16.0% co-habiting partner, 13.5% girlfriend/boyfriend, 10.7% were spouses, 3.9% someone paid by index case to have sexual relation, 8.5% someone paid the index case for sex, as reported by the newly identified index. 67.6% of the index cases self-reported not using condom during sexual intercourse in the last 12 months.

**Conclusion:** The high prevalence of HIV-risk exposure characteristics provided an additional opportunity to enhance targeted prevention initiatives among these groups, with focus in the female age group 15-34 years. The reported 10.8% MSM and 3.4% FSF, indicate that active CBS could be another channel to reach key population, and identify the new groups for targeted testing.

## **WEPEC137**

### **Profile of Female Sex Workers who are HIV positive, RWANDA- FSWs BSS-2015**

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**Background:** Female Sex Workers (FSW) top the list of high risk groups for HIV infection in Rwanda. Consequently, a behavioral and biological surveillance(BSS) is consistently done countrywide to document patterns of HIV infections amongst FSW in Rwanda. The latest BSS was done in 2015.

**Methods:** We used 2015 BSS data to analysis profile of FSW in Rwanda and its effect on the risk for HIV infections. HIV status, age, education level, marital status, time in sex work were the factors used to analysis the profile of FSW.

**Results:** Of the 1978 FSWs who participated in the 2015 BSS, 819/1967 FSWs tested HIV positive (45.8%). HIV positive FSWs were commonly Young [77.9% falls in 20-34 age band], less educated [86% with none or only primary school], Single [57.3%], without children [85.2%], and had less than 4 years in sex work [54.9%].

One in four HIV positive FSWs did [23.2%] not use condom consistently and didn't have comprehensive knowledge on HIV [25.8%], (. Around 72 % HIV positive FSWs were physically abused and 38 % were sexually abused. Age had an effect on the risk for HIV infection [OR=1.6 for 20-24 years and OR=4.1 for 40+ years, considering 15-19 as a reference group]. FSW not tested for HIV in the past 12 months are two times more likely to have HIV infection compared to those tested [OR=2.6, 95% CI: 2.0 - 3.4, 0.0001]. Victims of sexual abuse [OR=1.3, 95%CI: 1.0 - 1.8] and lower level of education [OR=1.6, 95%CI: 1.2- 2.2] had also an effect on HIV infection.

**Conclusion:** The planners of HIV prevention programs should be focused on these aspects mentioned in section of results by promoting the education level of FSW, facilitating their access to HIV prevention programs and helping them to create income-generating activities.

**Key words:** Profile, FSWs, HIV

## WEPEC138

### Tuberculosis Treatment Outcomes among Prisoners and Non-prisoners in Zomba, Malawi: Retrospective Study

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**Background:** TB remains a major global health problem. It is particularly prevalent in prisons in sub-Saharan Africa due to overcrowding, malnutrition, high HIV prevalence and insufficient medical services. Prisoners have experienced worse treatment outcomes than the general population. We investigated the TB treatment outcomes and predictors of unsuccessful treatment outcomes among prisoners and non-prisoners.

**Methods:** We retrospectively reviewed TB registers of prisoners and non-prisoners diagnosed with TB from January 2011 to December 2016 at Zomba Maximum Central Prison and Zomba Central Hospital, Malawi. The study used routinely collected data extracted from national, standardized TB treatment monitoring tools. Successful treatment outcome was classified as the total for cured and completed treatment while unsuccessful treatment outcome was classified as the total of deaths and treatment failures. We used descriptive statistics to compare the demographics and TB treatment parameters among prisoners and non-prisoners and computed multivariate analysis to predict the independent factors of unsuccessful treatment outcomes.

**Results:** Of 1652 registered patients, 27% were prisoners (all males) and 72% were non-prisoners (58 % males). The median age was 35 years (IQR: 29 - 42); 76 % were Pulmonary TB cases (78 % among prisoners vs 75% among non-prisoners); 83 % were new TB cases (77% among prisoners vs 86% among non-prisoners); and 65 % were HIV positive (50 % among prisoners vs 71% among non-prisoners). Regarding treatment outcome, 1472 (89%) were cured and/or completed treatment (93% among prisoners vs 88% among non-prisoners), 2(0.2%) were treatment failures, 122 (8%) died (5 % among prisoners vs 8 % among non-prisoners) and 55 (3%) were not evaluated (1% among prisoners vs 4% among non-prisoners). Age greater than 35 years (aOR = 0.68: 95% C.I: 0.58 - 0.80), Extra-Pulmonary TB (aOR=1.69: 95% C.I: 1.08 - 2.63), HIV positive status (aOR = 0.63: 95 % C.I: 0.42 - 0.94) were independent factors of unsuccessful TB treatment outcomes.

**Conclusion:** Good TB treatment outcomes which are comparable to the general population can be achieved among Malawian prisoners despite the challenging prison conditions.



## **WEPEC139**

### **Achieving HIV Zero Viral Load Adherence for Adolescent 10-24 Years through Operation Triple Zero Initiative**

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**Background:** ART coverage has contributed to reversal of the global trend in HIV/AIDS mortality. As a result of curbing the rise in epidemic 'Getting zero campaign' has been promoted with a vision of achieving universal health care through reducing HIV/Aids prevalence among HIV infected population In order to achieve 95:95:95 strategy.

Kisii county is ranked eleventh nationally with a total of 5976 new infection annually and the most affected population being adolescent aged 11- 24 years where their ART coverage stands at 92% while viral suppression is at 65% . Operation Triple Zero initiative has helped adolescent with high viral load to closely monitor their appointments, drug intake in order to achieve zero viral load suppression. The slogan for the initiative is 'Zero for hero's'. The aim is strengthening surveillance system of HIV Infected adolescent aged 10-24 years through Operation Triple Zero

**Methods:** Purposive sampling was employed to recruit HIV Positive. Adolescent were recruited voluntarily those with high viral load and those who have suppressed to join a club where they were educated on how to take care of their health through triple zero initiative which means first Zero is no missed Appointment, the second Zero is No missed Drug and the last Zero is maintain Zero viral Load. Review of viral load was done after six month to monitor their viral load suppression. As a way of strengthening the initiative, surveillance committee team was formed among the health workers with small motivation to help them utilize data for decision making.

**Results:** The intervention encouraged adolescent to joint an OTZ club where they share their experience with peers and also kept track of their of their appointment and their medication thus resulting to low viral load, active surveillance committee utilizes data timely for decision making and response to emerging issues. Champion adolescents also will continuously surveillance committee to encourage the rest of the adolescents on the importance of drug adherence through taking treatment to be their own initiative

**Conclusion:** They enjoyed coming to clinic because of recreational activites planned for on the clinic day and thus encourage no missed appointment and treatment.

**Key Words:** **OTZ:** Operation Triple Zero, **ART:** Antiretroviral Therapy, **HIV:** Human Immunodeficiency Virus, **AIDs:** Acquired Immunodeficiency Syndrome.

## WEPEC140

### Characterization of Viral Load Testing According to National Guidelines in Selected Health Facilities in Malawi

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**Background:** As of 2014, Malawi National Guidelines recommended viral load (VL) testing at 6 months and every 2 years after antiretroviral therapy (ART) initiation.

**Methods:** From July to August 2018, a cross-sectional study was conducted in 44 facilities supported by Elizabeth Glaser Pediatrics AIDS Foundation that utilize paper-based patient records systems in four district. Data on demographics and most recent VL test (VLT) for clients who were on ART for at least 6 months were collected through patient medical chart and VL register abstractions. We used descriptive analysis to assess the distribution of the outcome variables, based on the expected VLT intervals, per the national guidelines and VLT on time (+/- 1 months of recommended testing intervals), and by demographic characteristics (sex and age).

**Results:** Those eligible for VL testing by most recent testing time point were 4,607 at 6 months, 5,813 at 24 months, 6,320 at 48 months, 4,406 at 72 months, 2,317 at 96 months. The 6-month time point had highest proportion of clients completed VLT (70.6%), compared to other test intervals of 59.1%, 60.0%, 58.3%, and 62.6%, respectively. At 6 months, 44.7% were tested on time, with a decline to 10.0% by 96 months. The percent of women who completed VLT was higher than the percent of men for every time-period [statistically significant at 48-month VLT (62.5% vs 54.6%, respectively,  $p < 0.01$ ) and at 72-month VLT (60.7% and 52.2%, respectively,  $p < 0.01$ )]. Completing VLT was highest among age groups less than 20 years old at all test periods (at 24 months: 64.5% for 0-9 year olds, 58.9% for 10-14 year olds, 56.8% for 15-19 year olds, and 59.0% for 20 year olds and older). Except for 6-month VLT, 0-9 year olds most frequently completed VLT on time, as compared to other age groups (at 48 months: 15.5% for 0-9 year olds, 11.3% for 10-14 year olds, 9.3% for 15-19 year olds, and 12.0% for 20 year olds and older).

**Conclusions and Recommendations:** The findings describe gaps towards implementing VL testing policy in specific demographic groups. The decrease in completed and on time VLT after 6 months, consistent across sex and age groups, raises questions regarding provider and client education and testing behaviors. This evaluation can be used to structure programs to provide targeted care and treatment interventions according to client demographic characteristics, especially as Malawi scales up annual VL monitoring, per the 2019 updated policy.

## WEPEC141

### Prévalence Élevée de la Résistance aux Inhibiteurs Non Nucléosidiques de la Transcriptase Inverse (INNTI) chez les Patients Initiant un Premier Traitement Antirétroviral au Togo

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**Contexte:** La résistance transmise aux antirétroviraux (PDR) peut affecter les molécules des premières lignes antirétrovirales (ARV) recommandées par l'Organisation Mondiale de la Santé (OMS). Au Togo, plus de 43000 patients étaient traités par des antirétroviraux (ARV) en 2015 et seulement 5% de ces patients avaient accès à la charge virale. C'est dans ce contexte que cette étude dont l'objectif principal était d'estimer la fréquence de PDR chez les personnes VIH-1 positives initiant un premier traitement antirétroviral en 2017 a été réalisée. Les objectifs spécifiques étaient de : 1) Déterminer la fréquence de virus résistants et les sous-types circulant ; (2) Évaluer l'exposition aux ARV avant l'initiation aux ARV; (3) Apprécier l'impact sur les premières lignes de traitement.

**Méthodes:** Des patients adultes initiant un premier traitement ARV ont été inclus dans seize (n=16) sites cliniques des six (n=6) régions sanitaires du Togo entre septembre et octobre 2017. Les données socio démographiques ont été recueillies. Les tests génotypiques de résistance (TGR) ont été réalisés sur le gène *pol*(protéase et transcriptase inverse) selon l'algorithme de l'Agence National de Recherche sur le SIDA (ANRS 2016, version 27). Les analyses statistiques ont été faites avec le logiciel R version 3.3.2.

**Résultats:** Quatre cents (N=400) patients ont été inclus dans seize (n=16) sites cliniques. L'âge médian était de 38 ans [IIQ 30-46 ans] et 2/3 (62,50%) étaient des femmes. Les traitements initiés étaient le TDF/3TC/EFV dans 93% des cas. Sur le plan clinique, la médiane du taux de CD4 était 244 cell/mm<sup>3</sup>[IIQ 112-400 cell/mm<sup>3</sup>]. Vingt-quatre (n=24, 6%) ont déclaré avoir été exposés aux ARV, dont 70% (n=17) à la prévention de la transmission de la mère à l'enfant (PTME). Trois cent trente (n=330) patients ont bénéficié de TGR. La prévalence des PDR était de 17,58% intervalle de confiance(IC) à 95% [13,71-22,21], 8,18 IC 95 % [5,56-11,82], 8,79 [6,06-12,51] pour les inhibiteurs non nucléosidiques de la transcriptase inverse (INNTI), les inhibiteurs nucléosidiques (INTI) et les inhibiteurs de la protéase (IP) respectivement. Le sou type viral majoritaire était le CRF02\_AG.

**Conclusions:** Cette étude a mis en évidence une prévalence élevée de PDR au Togo en 2017. Selon les recommandations de l'OMS, ces données sont en faveur de la substitution des INNTI en première de traitement et pour le renforcement de l'accès à la quantification de l'ARN VIH plasmatique.

## **WEPEC142**

### **Etude Épidémiologique et Rétrospective sur 18 ans (1999-2017) des Patients VIH sous Deuxième Ligne d'Antirétroviraux à l'Hôpital Central de Yaoundé, Cameroun**

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**Introduction:** Des niveaux significatifs de résistance aux antirétroviraux dans la population pourraient potentiellement limiter les options de traitements futurs et augmenter le coût du traitement. La maîtrise de l'échec thérapeutique est un grand défi pour les pays à ressources limitées comme le Cameroun, où environ 280000 personnes sont sous traitement antirétroviral (TAR). Cette étude avait pour objectif l'identification précoce des patients à risque d'échec thérapeutique. Plus spécifiquement il s'agissait de décrire le profil clinique et épidémiologique des personnes sous TAR de seconde ligne dans le but final d'élaborer des initiatives qui pourraient limiter son occurrence et prévoir le besoin de traitement au-delà de la seconde ligne.

**Méthode:** Il s'agissait d'une étude descriptive et rétrospective du 1er octobre 2017 au 30 avril 2018 à l'Hôpital Central de Yaoundé (HCY). Tous les patients sous seconde ligne de TAR enregistrés au cours des années 1999 à 2017 ont été inclus. Les variables étudiées étaient essentiellement l'année d'initiation au TAR de première ligne, l'observance au TAR, le régime thérapeutique, le stade clinique, les raisons de passage sous seconde ligne, l'évolution du taux de CD4 et de la charge virale. Les paramètres d'analyse étaient principalement l'écart type et le P-value.

**Resultats:** Sur un total de 8784 PVVIH sous TAR à l'HCY, 869 (9,89%) étaient sous TAR de deuxième intention. Nous avons retenu 762 patients sous seconde ligne parmi lesquels 644 (84,5%) admis pour échec thérapeutique. Le délai moyen de l'initiation au TAR de première ligne à l'admission au protocole de seconde ligne était de 55 mois avec une médiane de 48 mois. Près de 535/644 (83,06%) des patients en échec thérapeutique présentaient un stade clinique avancé à l'initiation au traitement de première ligne et 479/644(74,4%) avaient un taux de CD4 inférieur à 200 à l'initiation au traitement de première ligne.

## **WEPEC143**

### **Sexual Debut, Age of Leaving School and Frequency of Employment Trajectories in Young Men and Associated HIV Risk: A Secondary Data Analysis of the Manicaland HIV Project in Zimbabwe**

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**Background:** Given the earlier age of peak HIV incidence among females compared to males, HIV prevention programs often prioritise the prevention needs of young women, at the expense of excluding young men. However, it may be possible that understanding risky socio-demographic pathways and risk factor interactions in young men can be harnessed to reduce HIV risk through prevention programs. Subsequently, this may also bear benefits in reducing the vulnerability of women.

**Methods:** Secondary data analysis of 6 population-based surveys done in 3 Districts of Zimbabwe, as part of the Manicaland HIV Prevention Project between 1998-2013. Data on 3770 men aged 15-29 years and HIV-negative at entry were analysed. Trajectories were sequenced based on age at sexual debut (SD), age left school and frequency of employment to assess the HIV risk associated with each pathway using Cox regression. Four trajectories were formed; (i) SD before leaving school and frequently unemployed, (ii) SD before leaving school and frequently employed, (iii) SD after leaving school and frequently unemployed (iv) SD after leaving school and frequently employed.

**Results:** 174 HIV infections occurred over 16420 person years (HIV incidence rate 10.6 per 1000pys, 95% CI 9.13-12.30). Compared to men who had SD before leaving school and frequently unemployed, men who had SD before leaving school and frequently employed had twice the risk of HIV infection after adjusting for location and study time (aHR 1.82 95%CI 1.10-3.02). Compared to the same baseline group, men who had SD after leaving school and frequently employed had four times risk of HIV infection (aHR 3.98 95% CI 2.44-6.48). There was no evidence that men who had SD after leaving school and frequently unemployed had a different risk to HIV infection compared to the baseline group (aHR 1.64 95% CI 0.87-3.09). Transactional sex, condom usage, number of lifetime partners, number of partners in the last 12 months were significant mediators of HIV risk.

**Conclusions:** Firstly, researchers should consider use of pathways in assessing how risk factors interact with each other in an individual to produce vulnerabilities to HIV in young men. The study show that SD before/after leaving school did not interact in a predictable way with frequency of employment episodes. Secondly, employment opportunities for young men, unlike for young women has potential of increasing vulnerability of young men to new HIV infections mediated by risky sexual behaviour.

## **WEPEC144**

### **Facteurs Non Biomédicaux Associés à la Séroconversion du VIH de la Femme Allaitante : District de Santé de Garoua I 2018**

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**Contexte:** L'épidémie du VIH/Sida se caractérise par sa féminisation à cause de la vulnérabilité des femmes à cette infection. Au Cameroun, bien que le re-testing des femmes enceintes soit une réalité, le dépistage n'est pas explicitement recommandé pendant l'allaitement ce qui expose le nourrisson en cas d'infection maternelle. L'objectif de cette étude était de déterminer les facteurs associés à la séroconversion au VIH chez les femmes allaitantes dans le district de santé de Garoua I.

**Méthodes:** Nous avons mené une étude mixte dans le District de santé de Garoua I. La population recrutée de manière exhaustive et aléatoire, était constituée de femmes allaitantes ayant une sérologie négative soit au troisième trimestre de grossesse ; soit deux fois pendant la grossesse ou pendant l'accouchement. Des questionnaires ont ainsi été administrés à 177 participantes (volet quantitatif). 07 entretiens individuels et 03 FGD ont été faits à (11) prestataires de soins et à (05) communautaires (volet qualitatif). L'analyse des données s'est faite sur SPSS et par analyse de contenu manuel.

**Résultats:** Les résultats montrent que : le taux de séroconversion des femmes allaitantes est de 4% dans le district de santé de Garoua I; Nous avons trouvé une association statistiquement significative entre la séroconversion au VIH des femmes allaitantes et le statut matrimonial (V de Cramer = 0,356), puis entre la séroconversion au VIH des femmes allaitantes et la catégorie socioprofessionnelle (V de Cramer = 0,382).

**Conclusions et Recommandations:** la séroconversion dans le District de Garoua I est multifactorielle. Elle constitue une faiblesse pour l'élimination de la transmission mère-enfant du VIH dans ce DS. C'est pourquoi, il serait capital pour les services de PTME d'intégrer le dépistage des femmes allaitantes séronégatives tous les trois mois pendant leur période d'allaitement.

Mots clés : séroconversion VIH, femmes allaitantes, Garoua I

## WEPEC145

### Gaps in Awareness of HIV-positive Status among Adults 15-64 Years in Rwanda - The Last Mile to Achieving Epidemic Control in Rwanda

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**Background:** Awareness of HIV+ status is a necessary step towards entering the care and treatment cascade. We analyzed data from the Rwanda Population-based HIV Impact Assessment (RPHIA) survey to evaluate Rwanda's progress toward the UNAIDS 90-90-90 targets and determine factors associated with lack of awareness of HIV+ status.

**Methods:** RPHIA was a cross-sectional, household-based nationally representative survey conducted between October 2018 and March 2019. Blood samples were collected from consenting individuals at the household and tested for HIV using the national algorithm, followed by laboratory confirmation. All HIV+ samples were tested for viral load. Viral load suppression (VLS) was defined as < 1000 HIV RNA copies/mL. Achievements for the first 90 (self-report of HIV+ status among confirmed HIV+), second 90 (self-reported current ARV use among those aware of their HIV+ status) and third 90 (VLS among those on ARVs) were calculated using appropriate survey weights. A logistic regression model identified factors associated with unawareness of HIV+ status.

**Results:** Of the 30637 eligible participants aged 15-64 years who provided a blood sample, 934 tested HIV+ (3.0%). Among those who tested HIV+, the first 90 was 73.2% (Females=73.4%, Males=72.8%), the second 90 was 96.5% (F=96.2%, M=97.0%) and the third 90 was 90.1% (F=93.2%, M= 84.4%). The odds of being unaware were 2.5-times greater in 15-24 year old compared to 50-64 year old (95%CI:1.50-4.29) and 2.8 times greater in HIV+ who reported not testing compared to those who reported testing in the past 12 months (95% CI:1.8-4.2). These variables were associated with being unaware of HIV+ status: residing in Kigali compared to Southern Province (adjusted odds ratio (AOR)=1.8, 95%CI:1.1-3.1); no formal education (AOR=2.6, 95%CI:1.3-5.4) and primary education (AOR=1.8, 95%CI:1.0-3.2) compared to secondary education or higher; never married/cohabiting (AOR=2.6, 95%CI:1.7-4.1) and widowed/divorced (AOR=3.2, 95%CI:2.0-5.2) compared to those currently married/cohabiting; not using a condom during last sexual encounter (AOR=6.3, 95%CI:3.7-10.7); and not testing for HIV in the past 12 months (AOR=2.8, 95%CI:1.8-4.2).

**Conclusions:** Rwanda's challenge in reaching epidemic control remains in identifying those who are unaware of their HIV+ status. Our results indicate the need for targeted testing approaches for young never-married individuals with little or no formal education who have not recently tested.

## **WEPEC146**

### **Implementation of HIV Recency Testing in Rwanda: First Phase Experience**

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**Issues:** Reaching ambitious global goal of elimination of AIDS requires innovative approaches that help the program to efficiently monitor the HIV epidemic.

**Descriptions:** Since October 2018, Rwanda has integrated HIV recency testing into routine HIV testing services and case-based surveillance in 23 health facilities located in Nyarugenge, Kicukiro and Gasabo districts in the City of Kigali. HIV recency testing using a rapid assay that identifies newly diagnosed HIV-infected persons as recent or long-term infection acquired within the past 12 months or more than 12 months ago, respectively. Prior to antiretroviral treatment initiation, all consenting HIV positive people have a blood sample taken for recency testing. Since the initiation of the program, two approaches of recency testing have been used: a central hub testing approach where samples are collected and referred to the National Reference Laboratory (NRL) and point-of-care testing (POCT) where health facilities conduct the recency testing but samples testing "recent" are referred to NRL for VL confirmation. With POCT, patients with long-term infection receive test results on the same day while those with recent infection wait for approximately two weeks to receive their confirmed recency status. Data collected from October 2018 to May 2019 show that HIV recency testing was done for 842 people. Of these, 769 (91.3%) had long-term infection while 73 (8.7%) had recent infection. Majority of recent infections were in women (64.3%, n=45). Men and women in 25-34 age group had the highest number (43.8%, n=32) of recent infections compared to others age groups. Fifteen (20.6%) of the recent infections were among adolescents and young adults aged 15-24 years.

**Lessons learned:** Implementation of HIV recency testing is an important and feasible approach that provides the program with timely information to detect and investigate potential hotspots or clusters of HIV transmission. Additionally, socio-demographic characterization of newly identified HIV cases informs efforts and resources for targeted HIV prevention interventions. Close follow-up of recency testing implementation especially at the beginning stages is essential to ensure acceptability by clients.

**Next steps:** The focus for routine monitoring for recency testing was mainly in Kigali health facilities and lessons learnt in this phase will inform a national scale-up.



## WEPEC147

### Unsuppressed Viral Load and Associated Factors in Rwanda: Results from a Nationwide HIV Survey, 2018

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**Background:** Nationally representative survey to estimate HIV viral load suppression (VLS) and identify its predictors are important to inform appropriate program decisions towards HIV epidemic control. The Rwanda Population-based HIV Impact Assessment (RPHIA) conducted between October 2018 and March 2019 provided an opportunity to estimate population-level HIV VLS and identify factors associated with non-suppression

**Methods:** RPHIA was a cross-sectional household-based survey a total of 30,637 participants aged 15-64 were counseled and tested for HIV at their household using rapid diagnostic tests according to national guidelines. All HIV-positive participants confirmed using BioRad Geenius™, had their HIV viral load (VL) measured at a central laboratory. We defined unsuppressed VL as HIV RNA  $\geq 1000$  copies/mL plasma. Variables assessed included socio-demographic characteristics, self-reported awareness of HIV status, and selected sexual behavior attributes. All statistical estimates accounted for the complex survey design

**Results:** Of the total 934 participants who tested HIV positive, VL was measured for 931 (99.7%). Among those, 76.2% (95% confidence interval [CI] 72.2-80.1) were virally suppressed and 23.8% (19.9-27.8) were unsuppressed. Non-suppression was higher in males (29.6%, N=301) than females (21.0%, N=630). Participants who reported not being aware of HIV-positive status had higher VL non-suppression (56.3%) than those who were aware (12.2%). In the multi-variable logistic regression model, factors associated with higher odds of being virally unsuppressed included males compared to females (adjusted odds ratio [aOR] 1.91, 95% CI 1.21-3.02), residence in the East compared to the South (aOR 2.41, 95% CI 1.13-5.17), being never married compared to being currently married or living together (aOR 2.51, 95% CI 1.39-4.52), not using a condom during last sexual intercourse in the past 12 months compared to using a condom (aOR 2.00, 95% CI 1.12-3.57), and being unaware of HIV status compared to being aware (aOR 8.46, 95% CI 5.43-13.18)

**Conclusions and Recommendations:** Significantly higher viral load levels were found in males, residents in the East, those who never married, who did not use a condom at last sex, or who were unaware of their HIV status. The heterogeneity in VLS highlights the need for more targeted interventions to enhance VLS across socio-demographic strata, strengthen case finding strategies, and link new HIV-positive patients to treatment

## **WEPEC149**

### **Risky Sexual Practices among Adult Men in Zimbabwe: A Comparative Analysis between Circumcised and Uncircumcised Men**

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**Background:** Voluntary Medical Male circumcision has been shown to provide reduced risk of heterosexual transmission of HIV in men by up to 60% in randomized controlled trials. However, little is known about risky sexual behavior in men, following circumcision. HIV prevalence in Zimbabwe is 14% in the general population and 11% in male population.

**Methods:** Secondary data analysis was performed on data from the 2016-2018 Zimbabwe Demographic Health Survey to determine condom use, STI infection, number of sexual partners and paying for sex among circumcised and uncircumcised men. Survey mode of Stata® was used which accounts for sampling weights and stratification in the survey design. Male sample weights collected during the survey were set as the primary weights during analysis. Sample stratum number was incorporated in the analysis to account for stratification in the survey design. Adjusted Odds Ratios and Crude Odds Ratios were used in multivariate and bivariate analyses respectively.

**Results:** A total of 4955 men aged 25 years and above participated and 12.29% were circumcised. The mean (SD) age was 36.52 (7.94) years. There was no significant difference between circumcised and uncircumcised men with respect to risky sexual practices ( $p < 0.05$ ). However, uncircumcised men who did not use condom during last sexual encounter were at increased risk of contracting an STI compared to circumcised men (AOR 1.58, 95% CI [1.19; 2.10]). Paying for sex increased chances of contracting an STI amongst uncircumcised men compared to circumcised men (AOR 1.90, 95% CI [1.46; 2.45]). Being uncircumcised increased risk of contracting an STI, thus circumcision was protective (AOR 1.08, 95% CI [0.70; 1.66]) although not significant.

**Conclusions:** This analysis suggests that undergoing male circumcision is protective against effects of risky sexual behaviour, especially risk of contracting STIs. There is need to increase circumcision coverage due to this potential benefit.

## **WEPEC150**

### **L'Observatoire Communautaire de Traitement du Togo: Un Baromètre pour l'Atteinte des 90\*90\*90**

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**Indiquer le problème étudié, la question de recherche** : Au Togo, la prévalence au sein de la population générale est à la baisse passant de 2,5% en 2013 à 2,1% en 2018. Celle-ci cache cependant des disparités avec notamment 22,5% chez les HSH et 13% chez les PS. L'accès de ces cibles aux services de protection et de soins devient donc préoccupant. Face à cette situation alarmante, RAS+Togo, avec l'appui de ITPC-Afrique de l'Ouest, met en œuvre un Observatoire Communautaire de Traitement qui est un outil de veille, d'alerte et de plaidoyer pour traquer les informations susceptibles de constituer des barrières pour l'atteinte des 90\*90\*90.

**Méthodes:** A l'aide d'outils standardisés, des agents de collecte collectent mensuellement des données qui serviront à suivre les tendances à l'accès au traitement le long de la cascade VIH et utilisées pour des actions ciblées. Pour ce faire 3 zones communautaires avec 11 sites de collecte, offrant des services à plus de 24,23% de la file active nationale, ont été identifiées. Cette collecte permettra ainsi de faire un suivi communautaire conduit par les PVVIH pour l'accès à un traitement ARV de qualité et sans interruption. Les données collectées subiront l'épreuve de la validation par le Groupe Consultatif Communautaire. Les données validées suivront le circuit de remontée selon le modèle Observatoire Communautaire de Traitement-ITPC régional-ITPC Global.

**Résultats:** De juin 2017 à décembre 2018, en matière de prévention, 64443 personnes ont été dépistées. Environ 97,86% (n=63070, N=64443) connaissent leur résultat. Parmi les populations qui ont eu accès au dépistage, on note que 100% des HSH (n=3357, N=3357), 100% des PS et de leurs clients (n=12897, N=12897) et 100% des femmes enceintes (n=18999, N=18999) dépistés connaissent leur résultat. Sur la même période, 6536 personnes, soit 45,71% (n=6536, N=14296) ont reçu un test de charge virale. Sur les 6536, 5518, soit 84,42% (n=5518, N=6536) ont une charge virale supprimée ou indétectable.

**Conclusions et Recommandations:** Grâce aux données relatives à 24,23% de la file active, l'Observatoire Communautaire de Traitement dispose d'éléments probants représentatifs de la situation épidémiologique du pays. C'est ainsi qu'à l'image des données collectées par le dispositif, on peut se rendre compte que la population accède de plus en plus au dépistage. Par contre l'accès à la charge virale demeure problématique notamment le test de charge virale et aussi le rendu des résultats.

## WEPEC151

### Estimating the Age- and Sex-specific UNAIDS "90-90-90" Goals in Senegal Using Programmatic Data

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**Background:** Within the framework of the UNAIDS Fast Track to end AIDS by 2030, this research aimed at estimating the progress made towards the 90-90-90 targets in Senegal, a leading country engaged in free access to ART and the Test&Treat strategy. Although Spectrum provides overall yearly estimates of the targets, this research aimed at informing the national program with estimates by age and sex, and some key regions.

**Methods:** All the data were age- and sex-specific and relative to the year 2017. Demographic projections were done by the national agency for demography. Age- and sex-specific prevalence data were provided by Spectrum and regional estimates by the DHS survey. Number of HIV patients linked to care, HIV patients on ART, those having benefited from a viral load testing and being viral suppressed were extracted from the PLWHIV national database. Data were updated and curated before analysis. Several scenarios were used and some data were modelled. The first 90% was estimated as the proportion of HIV-positive patients in the population who accessed care. The second 90% was directly measured as the proportion of HIV-positive patients accessing ART registered in the health structures. Using viral load data directly from the networks of viral platforms, the third 90% was split in two sub-90%: access to viral load among treated patients and viral suppression among those who acceded.

**Results:** The proportion of HIV positive patients linked to care was below 50% among men, irrespective of age, but particularly low before the age of 20 years (30%). Among women this proportion also remained below 30% before the age of 20 and then tended to increase to reach 50% or more by 25 years of age. The percentage of HIV patients linked to care under treatment or who started their treatment in 2017 exceeded 95%, irrespective of age.

The access to one viral load measurement in 2017 was on the average below 30% but particularly low in the South-most part of the country. Viral suppression increased with age from 40% among the youngest to more than 80 % among the oldest.

**Conclusions and Recommendations:** These results call attention to the large gaps remaining to reach the first and third "90". Increasing diagnostic coverage and linkage-to-care toward all men and the youngest should be a priority. Access to viral load testing should continue to be deployed with an emphasis on the Southern part of Senegal.

## **WEPEC152**

### **Reducing Double Counting in HIV/Aids Program Targeting Key and Vulnerable Populations - Effect of Client-based Monitoring in Malawi**

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**Issue:** Malawi adopted the UNAIDS 90-90-90 treatment target towards ending the AIDS epidemic. Effective use of strategic information is paramount in monitoring the progress of the HIV/AIDS response. One major reason for ineffective tracking of program performance is double counting, an error that occurs when individuals or services are counted twice. The problem is common in HIV/AIDS programs targeting key and vulnerable population.

To reduce the problem Actionaid rolled out client-based monitoring system. The process involved introduction of unique identification codes (UIC) and revision of registers, reporting forms, referral slips & database to capture individual client data. This is as opposed to aggregated data which was collected. Data was entered in program database monthly.

**Description:** Data quality audits were conducted once every six months; 2 before and 2 after the system was rolled out. A standard data quality audit tool was used by trained staff. Selected indicators were recounted from registers and results compared with what was reported from randomly selected service delivery points. Other standards of data quality (confidentiality and completeness) were audited. The error percentage was documented for every point audited. Mean error percentage was computed for 2 periods: Two mean t-test was used to test for difference between the means. Budget analysis was done to establish cost-effectiveness of the intervention.

A total of 4 data quality audits were conducted over a period of 24 months. There was a statistically significant 56% reduction in double counting. We also noted an increase in confidentiality and precision of data. Despite the benefits, the system increased the burden of data collection and entry by 85% and budget by 65%.

**Lesson learnt and next steps:** Rolling out client-based monitoring system has proved to be effective in minimizing double counting. The model has also been effective in increasing other aspects of data quality of HIV/AIDS program such as confidentiality and precision. Despite the advantages the client-based increase the cost and data capturing burden.

## **WEPEC153**

### **Community-led HIV Prevention Shadow Reports. Assessing Progress and Gaps in National HIV Prevention Responses from a Community Perspective**

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**Issue:** We are in a HIV prevention crisis. In 2018 there were 1.7 million new HIV infections globally. Despite the launch of the Global Prevention Coalition in October 2017 and renewed global efforts to fast track the HIV prevention response, many regions and countries are not on track to reach the 2020 prevention targets included in the 2016 Political Declaration on Ending AIDS. The implementation of the ambitious HIV Prevention 2020 Roadmap in the 28 countries with the highest number of HIV infections is intended to address the most common barriers to progress, including a lack of focus on the most marginalised populations and the absence of combination prevention packages tailored to the needs of each different population. However, progress so far has been uneven, with key populations left behind in many countries.

**Description:** In July 2018 Frontline AIDS published a series of shadow reports tracking implementation of the HIV Prevention 2020 Roadmap. Developed by civil society and community-led organisations, these reports provided an alternative assessment to official progress reports put forward by national governments and UNAIDS. In the summer of 2019 these reports have been updated. Communities across six countries (Kenya, Malawi, Mozambique, Nigeria, Uganda and Zimbabwe) assessed their national HIV prevention responses, identifying progress achieved so far but also critical gaps that still need addressing.

**Lessons learned:** Most of the countries reviewed will not be able to achieve their 2020 prevention targets. The updated HIV prevention shadow reports demonstrate that the current pace is far too slow to achieve the goals set. Although prevention responses have started tailoring their approaches based on geographical areas at elevated HIV risk and on the populations that are more likely to become infected, this is not happening systematically across the countries or in ways that make use of social contracting mechanisms. Similarly, progress on the removal of structural barriers, such as laws criminalising key populations, has been minimal or completely non-existent and this is mainly due to poor political leadership.

**Next steps:** Countries must dramatically step up implementation of their national HIV prevention roadmaps. For all countries assessed, this means renewed political leadership for prevention, including for marginalised populations, and real investments (human, technical and financial) in HIV prevention and community-led responses.

## **WEPEC154**

### **Achieving High Data Quality: A 5 Year Retrospective Data Quality Review of Routinely Reported HIV Program Data in Rwanda (2014 - 2019)**

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**Background:** Efficient use of high quality data is essential in planning, implementation management and decision making at all levels. RBC/HIV Division, with support from partners embarked on an effort to train health workers, build health information systems and conduct routine data quality assessments to increase confidence and improve reliability of health data and related information. We conducted a data quality to assess the changes in timeliness of data reporting, completeness and accuracy between 2014/2015 and 2018/2019

**Methods:** A total of 565 (98%) health facilities offer HIV services. A data quality assessment was conducted, covering a period from July 2014 to June 2019, using data from the Rwanda HIV Management Information System (RH MIS) to assess timeliness and completeness. Data Quality Assessments (DQA) were used to measure accuracy. Accuracy was defined as, how close a measurement was to the true values. Two data quality elements, Reliability and precision (how consistent results are when measurements are repeated (Random error)) were not assessed. Information was also obtained from Integrated Supportive Supervision (ISS)/DQA datasets to triangulate with RH MIS data

**Results:** Timeliness improved from 51.8% in 2014/15 to 90.8% in 2018/19. All the HIV different reports, reported timely with a rate >85%. Completeness improved from 74.7% in 2014/15 to 97.3% in 2018/19. All the HIV different reports, completed at a rate >95%. Data accuracy improved from 93% in 2015 to 98% in 2018. The ISS/DQA conducted in June to July 2018 revealed a high data accuracy (error at site level being < 5%) in the HIV indicator variable (Number of PLHIV on ART) estimated at 98% in 85 visited health facilities. The ISS/DQA recently conducted in May 2019 suggests that the accuracy in the HIV indicator variable, in 135 assessed sites, was at 95%. The main reason/causes of poor data quality were data entry errors, misinterpretation of indicators and non-compliance to established ministerial instructions/guidelines/standard operating procedures

**Conclusions and Recommendations:** There was improvement in all assessed data quality elements for HIV indicators. To sustain this level of data quality, Rwanda needs to continue investing resources in Continuous data Quality Improvement at all service delivery levels, especially the interoperability between HMIS and EMR (Electronic Medical Record) to avoid any misreporting.

## **WEPEC155**

### **Using Data to Increase HIV Case Finding among Key Population: A Case of Zambia USAID Open Doors Project**

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**Issues:** There is limited data on the HIV epidemic among key populations (KPs) in Zambia. KPs are considered at high risk of contracting HIV but have limited access to HIV services due to stigma and criminalization. The USAID Open Doors project in Zambia which is funded by PEPFAR/USAID, targets KPs such as female sex workers, men who have sex with men, and transgender people. In December 2017 the program HIV positivity among KPs was only 9.2% (lower than the national prevalence) highlighting gaps in case finding.

**Descriptions:** To address the issue of HIV prevalence, based on reviewed data, the project introduced and oriented staff to new targeted testing modalities in April 2018 to enhance case finding and achieve high HIV yield. In addition, it implemented high frequency reporting using a low-cost Microsoft Excel tool at the sites to collect the data. The key indicators were collected daily and sent by email to a data manager at the central office. Using the 'merge' function in MS Excel, daily site reports received were merged and added to a pre-set database. The database had pre-set formulae that enabled data analysis and visualizations. These reports were reviewed daily in the "Situation Room" and used to make decision with real-time feedback to all sites and used by senior management to direct technical support and address gaps.

**Lessons learned:** From October 2018 to March 2019, 10,272 clients were tested for HIV with 3,388 (33%) found to be positive compared to 9,679 clients tested and 899 positives from October 2017 to March 2018 before implementation of new targeted testing modalities, daily reporting and use of data. Linkage to ART also increased from 74.6% (671/899) before the intervention to 98.2% (3328/3388) after. The yield from Index case testing (ICT) was 67% followed by social networking testing (SNT) strategy 35%, drop-in center 30% and lowest mobile outreach 29%. Through regular analysis of key program indicators and giving feedback on daily activities on targeting testing and linkage to ART project saw an increase in yield especially from ICT and SNT. Daily monitoring of HIV programs enables swift identification of the problem and quick action on any identified challenges.

**Next steps:** Continue daily reporting, analysis, feedback and use of data for decision making. There is need to promote routine data use for management decision making and accountability at every level of project implementation by building staff capacity.



## **WEPEC156**

### **Bilan Biologique des Charges Virales VIH à l'Institut Pasteur de Côte d'Ivoire : Leçons Apprises en 2018?**

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**Contexte:** La charge virale (CV) plasmatique est la quantité de particules virales dans le sang d'une personne infectée. Elle permet de mettre en évidence l'échec virologique qui est la phase précoce de l'échec du traitement ARV. Depuis 2016, la Côte d'Ivoire est engagée dans une politique d'extension de la charge virale à l'ensemble des patients sous ARV pour satisfaire aux objectifs 90/90/90 de l'ONUSIDA. L'objectif de cette étude est de présenter un bilan biologique de la charge virale VIH depuis le passage à l'échelle à l'Institut Pasteur de Côte d'Ivoire pour 2017 et 2018.

**Méthodes:** Il s'agit d'une étude rétrospective de 14512 patients infectés par le VIH pour la réalisation des CV. La quantification de la charge virale a été réalisée à l'aide de l'analyseur Cobas Ampliprep (Roche) avec le plasma issu de sang total. La réalisation de la CV est conforme aux instructions du fabricant. Le diagnostic de CV est un examen sous anonymat des patients selon le programme national de lutte contre le SIDA.

**Résultats:** En 2017 et 2018, 14512 patients ont effectué une charge, ce qui correspond à 28% (2374/8439) pour le sexe masculin et 71,8% (6065/8439) pour le sexe féminin. Il s'agit d'une croissance de 18.75% par rapport à 2016.

Selon l'ONUSIDA et l'OMS, le seuil de détection pour l'évaluation de l'efficacité du traitement ARV après 6 mois est de 1000 copies/mL et que 90% des patients sous traitements doivent être non détectables. En 2018, sur 2374 patients de sexe masculin, 75% (1779/2374) ont une CV non détectable et 77% et sur 6065 patients de sexe féminin, 77.3% (4690/6065) ont une CV non détectable. Pour 8439 patients en 2018, 76.65% (6469/8439) ont une CV non détectable. Les résultats similaires sont observés en 2017.

**Conclusion & Recommandations:** La surveillance des CV est un outil biologique très important pour le suivi des personnes vivant avec le VIH et la diminution de la transmission virale. Le passage à l'échelle pour l'atteinte des objectifs 90/90/90 a été effective pour l'IPCI mais le taux de 90% de CV non détectable est en cours de progression. Une surveillance active est nécessaire pour assurer la diminution des taux de CV par une collecte de qualité, un suivi biologique, une disponibilité des réactifs et une implication forte des acteurs clés.

**Mots clés :** Charge virale, VIH, Bilan biologique, Côte d'Ivoire.

## WEPEC157

### Viral Load Implementation in ANSS, in Burundi: A High Virological Success (OPP-ERA Project)

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**Background:** In resource-limited settings, viral load (VL) monitoring remains one of the bottlenecks of HIV care for patients on antiretroviral therapy (ART). In 2014, the OPP-ERA project implemented a molecular biology laboratory for HIV VL monitoring at the ANSS (Association Nationale de Soutien aux Séropositifs) an associative medical center in Bujumbura, Burundi. The objective was to describe this 6 year experience.

**Methods:** All samples collected from August 2014 to April 2019 were considered for analysis. VL was measured on blood plasma using the Generic HIV VL assay (Biocentric, Bandol France). Virological success was defined as a VL < 1000 copies/mL. Factors associated with virological success and with availability of a confirmatory VL were identified using logistic regressions. In case of VL ≥1000 copies/mL, national guidelines recommend a confirmatory VL after 3 to 6 months of adherence strengthening.

**Results:** A total of 47,505 VL were measured in the OPP-ERA project accounting for 30,791 patients on ART (1,595 patients in 2014 to 7,475 in 2018). Patients who benefited from VL monitoring were essentially women (n=20,872, 67.8%) and adults (n=26,977, 87.6%). Patients were essentially on 1st line ART (median time on ART: 36 months), this proportion declining over time (p< 0.001). Interestingly, the proportion of patients on ART for 12 months increased with time, suggesting that, at the beginning, priority was given to those on ART for longer, when in 2019 those who initiated ART more recently have better access to VL monitoring. Overall, more than 90% of patients were in success at their first virological evaluation. In a multivariate analysis, proportion in success was significantly higher in women, in patients on 1st line ART and in patients on ART for longer. Of the 3,752 patients with VL ≥1000 copies/mL, a confirmatory VL was available in only 540 (14.4%) cases. Availability was significantly improved in time and in patients on 2nd or 3rd line ART. The median delay between blood collection and return of the result was 18 days (IQR: 10-36).

**Conclusions and Recommendations:** The ANSS performed virological evaluation for over 30,000 patients on ART. The proportion of patients in virological success at the threshold of 1000 copies/mL remained high and stable around 90%, indicating that high quality of HIV care could be sustained within an associative medical center, but some aspects of VL monitoring still need to be improved.

## **WEPEC158**

### **Focus - Field Observation Community Understanding Strengthening - Innovative Social Audit Leveraging Government Machinery**

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**Issues:** A robust monitoring and evaluation strategy and buy-in from government counterparts are essential when assessing community-based HIV testing programs. AHF India conducted a Social Audit strategy (FOCUS) by involving external Consultants and Government institutions to authenticate and validate the outputs of the interventions. The partners included Civil Society Organizations (CSO) conducting Community Based HIV testing across India. The selection of the sites was purposeful to avoid duplication of testing services in those areas

**Descriptions:** FOCUS - Field Observation Community Understanding and Strengthening - an extended Social Audit with outreach staff and CSO heads was conducted quarterly to approximate the quarterly outputs as received from monthly reports. The government involvement was directed at a review of progress against indicators by collecting referral slips, Patient Identification Numbers (PID) issued by the government ICTC or ART centres and attaching them as proof of referral and proof of linkage of all newly identified positives. Real time tracking of stocks, Photo documentation & reports, data analysis was also done on a monthly basis. Experience-sharing and review meetings (ESRM) with partners, annual evaluation of program by external consultants from AHF Global (Quantitative & Qualitative) were conducted

**Lessons learned:** In 2017, the total number of tests conducted was 401,611 and 3,210 (0.8% sero positivity) people were identified positive who were first time testers. During the data analysis it was found that the project staff were able to link only 75% to ART treatment. Group discussions with field teams were undertaken in each site to understand and address the barriers towards linking identified people to ART. As a result, in 2018, the program identified 3610 (1% sero positivity) new clients and linked 87% to ART.

**Next steps:** It is imperative to ensure that an M&E strategy is sensitive to the different challenges of the field staff and support them in addressing it systematically. Continuous data analysis and sharing with the field staff helps re-strategizing and re-focussing effectively. Leveraging government institutions to authenticate the outputs ensures smooth working relationship and trust with the CSO partnerships.

## **WEPEC159**

### **Strengthening Voluntary Medical Male Circumcision Program Decision Making through Introduction of a Weekly Dashboard in Zimbabwe**

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**Issues:** In 2009, Voluntary Medical Male Circumcision (VMMC) was adopted by Zimbabwe's Ministry of Health and Child Care (MOHCC) as part of a comprehensive HIV prevention package. A situational analysis conducted in 2014 revealed that program data had to be more readily available in order to ensure effective program management. The main reporting platform, DHIS2 only provided the VMMC stakeholders monthly data which was insufficient to make meaningful program changes. Therefore there was need for a reporting system that provided reliable, Ministry owned program data which captured the program's efficiency and could be accessed at an increased frequency than what was initially available.

**Descriptions:** A weekly Microsoft Excel based dashboard was introduced designed to be a simple, visual and dynamic tool to inform program decision making. At the end of each week, MC team leads are responsible for ensuring data is sent to their respective Provincial VMMC Officers (PVO). At the beginning of the following week, each PVO consolidates the data and sends it to the national VMMC Data and Research Officer who inputs the week's data into the Excel workbook which automatically creates an updated dashboard for the week showing views at district, province and national level. The key indicators reported on are: performance against target, service delivery model used, surgical circumcision methods used, number of clients in target age group, number of service delivery teams and active mobilizers. The Dashboard is shared with MOHCC decision makers at national and sub-national level as well as with implementing, technical and funding partners who use it to analyze performance and inform their decision making.

**Lessons learned:** Increased program performance and efficiency by facilitating swift decision making on interventions to solve program challenges on the ground; Strengthened DHIS2 data reporting rates and completeness by providing another source of program data for comparison; Resulted in continuous iteration which is key to keeping the dashboard relevant and useful; Improved provincial level decision makers level interest on the performance of the program.

**Next steps:** Continued use of the weekly dashboard to inform data-driven decision making during the scale-up phase of the MC program is recommended. Scale up to other MOHCC programs is highly recommended as it is a low-cost, simple, user-friendly tool, ideal for resource limited interventions.

## **WEPEC160**

### **Evidence to Action: Use of Entry Point Yield Analysis Data in High Volume Health Facilities in Selected Districts of Zimbabwe to Improve Provider Initiated HIV Testing Practice**

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**Background:** HIV prevalence peaks at 13.3% in Zimbabwe whilst 74.2% of PLHIV report knowing their HIV status. There is great need to intensify efforts of reaching undiagnosed individuals being serviced at various entry points within the health facilities. There is need to document and utilize data on high yielding entry points so as to facilitate sound programmatic prioritization and economic use of resources. The FACE HIV programme has introduced entry point yield analysis to aid development of targeted strategies to increase identification of HIV positive clients per entry point.

**Methods:** An entry point analysis tool is used to aggregate entry point testing and results per facility. Data presented in this abstract covers period from October-December 2018 at 20 high volume health facilities across 4 districts Matebeleland South province supported by the FACE-HIV programme. Descriptive analyses were used to summarise the data using HIV testing yields per entry point by age, sex and district.

**Results:** Entry point yield analysis has generated timely evidence to improve the status HIV testing status quo per site and entry point TB entry point had the highest positivity of 57%, however the TB entry point had low volumes with regards to testing with high yield. The majority, of clients had unknown HIV status at presentation for health services as the Inpatient entry point had a yield of 10% with however the peads inpatient having a 0% yield. Weekend testing had a considerably high yield of 8% following by the youth friendly clinic having 6% yield.

**Conclusions and Recommendations:** Analysis shows that patients presenting with unknown HIV status reflects opportunities for offering HIV testing services. High yield in the TB entry points to the need of, concerted efforts required to support testing services to ensure the recommended testing of TB clients is attained. Weekend clinics are also vital with regards to testing adolescents.

## **WEPEC161**

### **Reduire la Prevalence du VIH par la Constitution d'un Reseau Communautaire LGBTQ au Benin**

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**Background:** Dans un environnement socio-politique discriminatoire à l'endroit des personnes LGBTQ, le dénie de l'orientation sexuelle, le refus ou la non accessibilité aux soins de santé en raison des stigmatisations et discriminations flagrantes, ont causé l'éloignement et le décès des pairs PVVIH du fait de leur silence et leur non prise en charge par les structures sanitaires. Cela a conduit à la formation d'un réseau afin de réunir les pairs, coordonner et centraliser les actions qui visent à venir en aide à la communauté sur la plan sanitaire et promouvoir nos droits. L'objectif est de valoriser la création de BESYP en tant que réseau communautaire, présenter les résultats obtenus grâce à nos activités spécifiquement sur le projet DINDJI-OCAL et la plus-value que cela a apporté à la communauté.

**Methods:** Installation des points focaux (relais communautaire) dans les centres de santé de référence afin de faciliter les références et la fréquentation des centres par les pairs ; formations de plusieurs PE issus de différentes associations sur le projet (cas du Projet DINDJI avec OCAL) afin de pouvoir atteindre un grand nombre de pairs au sein des associations. Au total (05) cinq centres de santé de référence ont été choisis en fonction de leur accessibilité et après formations des responsables des centres sur le Corridor Abidjan-Lagos. Il s'agit de la Clinique HAZOUME, le CM/DIST et l'ONG RACINES pour ce qui est du département du Littoral soit à Cotonou. Pour celui du département de l'Atlantique, nous avons le centre de référence CERID-ONG à Abomey-Calavi et SIDACTION pour le département de l'OUEME soit à Porto-Novo.

**Results:** Les résultats obtenus couvrent les périodes allant de Juin à Septembre 2016, Novembre 2016 au 30 Septembre 2017, Mars 2018 à Décembre 2018 pour les activités de sensibilisation et de CDV. Mais les résultats relatifs aux cas de VBG documentés couvrent la période 01 Janvier 2017 au 31 Décembre 2018. Ainsi, nous avons : Nombre de PE et PF formés : 60 PE et 10 PF ; Nombre de LGBTQ touchées: 2572 ; Nombre de personnes dépistées : 1537 ; Nombre de cas de VBG documentés : 233 ; Nombre de préservatifs masculins distribués : 227360 ; Nombre de préservatifs féminins distribués : 27650 ; Nombre de gels lubrifiants distribués : 454720

**Conclusions and Recommendations:** Nous avons une ferme volonté d'aller plus loin dans l'accompagnement des P+ pour le TAR et l'obtention de l'indétectabilité de leur charge virale au sein des populations clés vulnérables.

## **WEPEC162**

### **Viral Load Optimization in Key Population: A Strategy for Elimination of HIV Infection in Nigeria**

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**Issues:** Although a country with low HIV/AIDS prevalence, UNAIDS has described the Key population in Nigeria (Female Sex Workers, Men who have Sex with Men and People Who Inject Drugs) as a population with a high prevalence, remaining the drivers of the epidemic.

The irony is that there is a disproportionate intervention focus especially in viral load testing services for clients on antiretroviral therapy (ART) who are eligible; an important step in ensuring viral load suppression especially with the proven concept of "undetectable, un-transmissible".

**Descriptions:** APIN Public Health Initiatives is the largest CDC implementing partner in Nigeria supported by PEPFAR to provide HIV/AIDS treatment services to both the general population and key population in the Priority states of Benue and Lagos with about 144,058 and 25,780 clients on ART.

**Lessons learned:** Review of the quarterly program report for general population (GP) and key population (KP) side by side in last 3 quarters showed a consistent lower coverage for the corresponding KP in both states. In FY18 Q4 (July2018-Sept2018), out of 138,826 GP clients eligible for viral load test in Benue, 48,662 had documented viral load result with 35% coverage. The corresponding eligible KP in the state for the same quarter was 1,307 with 94 having documented viral load result and just 7% coverage. The picture in Lagos was similar as out of a total of 24,491 eligible GP, 18,107 had documented result with 74% coverage but for KP coverage was 33% (total of 178 out of 541 eligible clients).

Review of FY19Q1 report for GP in Benue with 119802 eligible clients showed 48470 had viral load result (40% coverage), the corresponding KP had 17% coverage as out of 1637 eligible clients only 271 had documented result. In Lagos, 22426 GP were eligible, 18528 had results and coverage was 83%, the KP eligible in the state for the same period were 409, tested 142 with coverage of just 35%

Finally, in FY19Q2, total eligible GP in Benue were 131,099, those with documented result 42874, coverage was 35%. The KP had a coverage of 25% as total of 1,233 were eligible of which 311 were tested. The pattern was not different in Lagos as 23319 clients in GP were eligible, 16521 tested with coverage of 71% but the corresponding KP had only 37% of clients(159 out of 427) with documented results.

**Next steps:** There is a need for a more KP focused HIV/AIDS intervention in Nigeria.

**Keywords:** Key Population, Viral Load Result, Eligible

## **WEPEC163**

### **Survey on Early Warning Indicators of HIV Drug Resistance in a Tertiary Health Facility, South West Nigeria**

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**Background:** Nigeria have had a rapid scale up of ART treatment which still continues to grow, however this may be associated with HIV drug resistance (HIVDR). HIVDR if not monitored has the potential to undermine the dramatic gains that ART programs have had and the human and financial consequences of resistance to HIV drugs are likely to be significant. In response to concerns regarding emergence and transmission of this HIVDR, the WHO and the CDC developed a global strategy for the assessment and prevention of HIV drug resistance. Monitoring of HIVDR early warning indicators (EWIs) is the first of the five strategies which assess factors associated with, and predictive of HIVDR.

**Methods:** Adult EWI was conducted in a tertiary health facility, south west Nigeria where ARV treatment is not totally free. All patients commenced on ART 2016 were included in the assessment. Indicators collected were: EWI<sub>1</sub> - Prescribing practice, EWI<sub>2</sub>-Loss to follow Up (LTFU) at 12 months, EWI<sub>3</sub>-Drug stock out, EWI<sub>4</sub>-Viral suppression and EWI<sub>5</sub>-Viral load completion.

**Results:** A total of 440 participants were included in the study. EWI<sub>1</sub>(prescribing of ART congruent with national/WHO guidelines): 415 of the 440 patients (94.3%) had appropriate prescription, the target of 100% was not met, this was a "poor" performance (< 100%). EWI<sub>2</sub>(LTFU 12 months after ART initiation):100 of the 440 patients (22.7%) were LTFU after 12 months of enrollment to ART, this was a "fair" performance (15-25%). EWI<sub>3</sub>(months with any day(s) of stock out of any routinely dispensed ARV drug): the health facility achieved an "excellent" performance (0%), there was no stock out during the review period. EWI<sub>4</sub>(Viral load suppression): 279 out of the 440 (63.1%) patients had viral load < 1000 copies/mL 12 months after ART initiation, a "poor" performance. (< 80%). EWI<sub>5</sub> (Patients with a 12-month viral load test result available): 323 out of the 440 patients had 12 -month viral load result available, an "excellent" performance (>70%).

**Conclusion:** The facility achieved excellence in two of the five indicators assessed, drug availability and viral load test which shows a good logistic system. However, there is need to intensify adherence counselling in other to reduce LTFU and increase viral suppression. Also the facility needs to come up with strategies to improve the prescribing practices to align with National and WHO guidelines. If these are put in place, the desired goal of ART treatment would be achieved.



## **WEPEC164**

### **Treatment Outcomes in HIV Care among Children and Adult in High Volume ART Sites in Rivers State Nigeria**

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**Background:** The HIV program involves sequential steps: HIV testing, diagnosis, linkage to care, retention and viral suppression. Access to Antiretroviral Therapy with appropriate regimen, continuity of care, technical competence of service providers on counselling and client focus are required to meet the bench mark for quality and standards of care. Most often than not, retention in care of PLWHIV is a public health issue. This study aims to review retention and variations in treatment outcomes among adult and children in high volume ART sites in Rivers State Nigeria.

**Method:** This is a retrospective cohort study investigating one-year treatment outcomes of adults (15 years and above) and children (0-14 years) who started ART between January 2017 and December 2017 across 6 high volume ART sites in Rivers State Nigeria (University of Port Harcourt Teaching Hospital, General Hospital Ahoada, Braithwaite Memorial Specialist Hospital, Model primary Health Centre Rumuokwurusi and Obio Cottage Hospital) supported by the USAID funded SIDHAS project and Global Fund. A treatment current of 1000 and above was the rationale for choosing the high-volume ART sites. The study involved secondary data collection, using the Retention Audit Determination Tool (RADET).

**Result:** A total of 3704 records of individuals who started antiretroviral therapy were reviewed. Of these, 4.7%(177) and 96.5%(3577) accounted for children and adult respectively. Treatment outcomes after one year on treatment showed that 61.0% (108) of children were active, 2.8%(5) dead, 19.2%(34) transferred-out and 35.6%(63) lost to follow up. Adults had 80.8%(2891) active outcome, 1.3%(48) dead, 2.7%(99) transferred-out, 12.2%(437) lost to follow up and 0.3%(12) stopped treatment

**Conclusion and recommendations:** Positive treatment outcome is important for viral load suppression, reduced morbidity and mortality. Transferred-Out is considerably high among children and even more for Lost to Follow Up outcome among children. We found variation in attrition between children and adults. Higher mortality rate was recorded among children as compared to adults. A well-planned children and adult counseling methods, follow up tracking, family centered approach and client understanding of lifelong ART are required in Patient Management and Monitoring to improve treatment outcomes for People Living with HIV especially children on ART.

## **WEPEC165**

### **Utilisation de l'Analyse Factorielle pour l'Optimisation du Questionnaire Comportemental YERELON et l'Identification des Groupes de Travailleuses du Sexe à Risque d'Infection par le VIH** **Bado Harouna Noël<sup>1</sup>, Traoré Isidore T<sup>1,2</sup>, Zerbo Salifou C.A<sup>1</sup>, Tassebedo Souleymane<sup>1</sup>**

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**Contexte:** Les Travailleuses du Sexe (TS) jouent un rôle majeur dans la dynamique de l'épidémie du VIH en Afrique. Disposer des méthodes simples et efficaces pour identifier les TS les plus à risque afin de leur offrir prioritairement les interventions de prévention s'avère donc très important. Notre étude vise à simplifier au maximum le questionnaire comportemental de l'étude ANRS 1222 tout en restant efficace dans l'identification des TS à risque.

**Méthodes:** Nous avons utilisé les données du questionnaire comportemental de la visite d'inclusion de la cohorte ANRS1222 suivie entre 2003 et 2006 à Bobo-Dioulasso au Burkina Faso. A la visite d'inclusion, ce questionnaire standardisé était administré à chaque TS pour collecter les caractéristiques sociodémographiques et comportementales. Lors de ces visites, les TS bénéficiaient d'un examen clinique et de tests biologiques (VIH, Herpès Simplex Virus de type2). Nous avons utilisé l'analyse factorielle pour optimiser ce questionnaire.

**Résultats:** Les TS occasionnelles représentaient 86% de l'effectif et étaient les plus infectées. Une grande partie des TS n'avait aucun niveau d'instruction (41%). Seulement 20% vivait en couple. Le revenu des clients était la principale source de revenu de la plus part d'entre elles soit 84%. La prévalence du VIH était de 36%.

L'analyse factorielle a permis de réduire le questionnaire comportementale de 60 à 4 variables qui sont l'âge, le nombre de clients la semaine dernière, l'utilisation du préservatif et l'utilisation de préservatif avec le client régulier. Les coefficients linéaires associés à ces variables étaient -0,117, +0,005, -0,081, -0,882 respectivement. Au seuil moyen de 2,57 ce scoring permettait de bien prédire l'infection à VIH chez une TS à l'inclusion à 68%. Ces quatre variables permettaient également de bien prédire la séroconversion VIH chez les TS à Bobo-Dioulasso à 64%.

**Conclusion:** Ce questionnaire réduit peut donc être utilisé dans les contextes à ressources limitées.

## **WEPEC166**

### **Utilisation de l'Analyse Factorielle pour l'Identification des Travailleuses de Sexe à Haut Risque de Grossesses Non Désirées, de HSV-2 et de Trichomonas Vaginalis**

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**Contexte et justification:** Lors de la mise en œuvre du paquet d'intervention Yerelon (ANRS 1222) à Ouagadougou chez les jeunes travailleuse du sexe, aucune nouvelle infection VIH n'a été enregistrée. Cependant l'incidence des grossesses non désirées et des infections HSV-2 étaient élevées. L'objectif de notre étude est d'identifier les groupes de TS qui restaient à risque malgré l'intervention étant donné que les grossesses indésirées et les IST constituent des marqueurs indirects du risque de VIH.

**Matériels et méthodes:** Nous avons utilisé les caractéristiques socio-démographiques et comportementales de la visite d'inclusion des TS et les données d'incidence des grossesses non désirées et de l'infection à HSV-2 de la cohorte de Ouagadougou suivie entre 2009 et 2011. Le questionnaire comportemental de la visite d'inclusion a été optimisé grâce à l'Analyse factorielle de données mixtes et la classification des variables.

**Résultats:** L'âge moyen dans la cohorte était de 21 ans et les TS avaient un niveau d'étude assez faible (jusqu'à 71% avaient au plus le niveau du secondaire). L'incidence de grossesse non désirées était de 31% et celle du HSV-2 s'élevait à 13%. L'analyse factorielle nous a permis de réduire le questionnaire comportemental de 57 à 5 variables que sont : l'âge, le nombre de partenaires réguliers, l'utilisation de contraceptifs hormonaux, le statut social (possession d'un lecteur DVD) et la proposition du préservatif au client. Ces 5 variables permettaient d'identifier efficacement les TS à risque de grossesse (69%), d'infection HSV-2 (87%) et d'infection à trichomonas vaginalis (97%).

**Conclusion:** Cette étude nous a démontré d'une part que le questionnaire de l'étude Yerelon mesurait des caractères redondants et pouvait être limité efficacement à 5 variables pour l'identification des TS les plus à risque.

## **WEPEC167**

### **Participatory Rapid Assessment as an Innovative Tool to Identify Barriers to HIV Health Services - Focus on Stigma and Discrimination**

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**Background:** Women in many countries often do not access some health services due to a myriad of factors. This paper focuses on the barriers to maternal and HIV health services as perceived by women living with HIV and by other community members, cutting across different settings, cultures, ethnic groups and religions.

**Methods:** It is based on a series of qualitative rapid assessment processes (RAP) in five African countries, involving community members in the RAP team. Thus, they participate actively in all stages of the assessment process, such as the development of culture and gender-sensitive interview tools, fieldwork, analysis of the findings and recommendations.

**Results:** Persons living with HIV - especially women - often do not uptake essential and available health services due to a combination of factors, such as poverty, a weak health system, gender and socio-cultural barriers, as well as fear of stigma and discrimination. Women living with HIV may experience high levels of stigma from family and community members and from some health providers. They often refrain from disclosing their HIV status to their partners or husbands since this may lead to violence, abandonment or divorce. This also poses a barrier to testing and to uptake of HIV treatment, including prevention of mother to child transmission.

**Conclusions and Recommendations:** Gender roles and unequal power relations may deter women from accessing maternal and HIV health services, thus avoiding possible disclosure of their HIV status. These barriers are enhanced by interactions with some health providers (both maternal and HIV), characterized by negative or disrespectful attitudes, also fueled by stigma and breaches of confidentiality.

Recommendations to deal with these issues include working closely with specific target groups in the community, as well as sensitization of health workers, using innovative techniques in order to enhance gender and culture-sensitivity of health services.

**Keywords:** RAP, HIV Disclosure, Stigma and Discrimination, Gender, Barriers to Health Services

## **WEPEC168**

### **A Study of Human Rights-based Approaches in Tuberculosis Programme for Prevention of TB/HIV Co-infection in Kenya**

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**Background:** Several scholars are agreed on the utility of human rights-based programming in health and social sector, nevertheless it is important to interrogate the specific correlations between its approaches and specific programmes. Tuberculosis (TB) retains its unwanted status as a leading infectious cause of fatality globally and among persons living with HIV and AIDS. This study intended to generate evidence for prioritization of the mix and levels of interventions for engagement in TB and human rights programming in order to measure the extent to which TB programme is successful in preventing HIV/TB co-infection.

**Methods:** Descriptive research design was adopted in the study utilizing both quantitative and qualitative approaches. Survey questionnaires and key informant interviews were used for data collection from sample size of 385 respondents. SPSS was used for the inferential analysis, Pearson Correlation and the Analysis of Variance (ANOVA)

**Results:** Capacity strengthening was the most influencing factor on the outcome of TB programmes ( $r(2) = .98, p < .05$ ). The other two factors i.e. strategic litigation and advocacy were equally significant and returned ( $r(2) = .97, p < .05$ ) and ( $r(2) = .94, p < .05$ ) respectively. The R square value obtained was 69.3%. The rest 30.7% variations were explained by other factors which were not captured in the model. ANOVA showed that the independent variables were statistically significant in influencing the effectiveness of TB programmes. 35% of the respondents were female and 65% were male showing the study to be somehow skewed towards male respondents since they account for almost two-third of the sampled population. This could be due to sociocultural complexes involving women participation in issues of public health concern.

**Conclusions and Recommendations:** The study indicated TB, HIV and other life-threatening diseases would require non-health sector human rights interventions to address broader social issues to overcome barrier to access. It shows government and all stakeholders should be willing to strongly play their role by putting a holistic health care system, legislation and a robust judicial architecture in place to enable civil society organizations and PLWTB/PLHIV maximize human rights-based strategies. The study recommends the three variables of study should be scaled up as part of a broader strategy in TB/HIV interventions.

## **WEPEC169**

### **Ethical Challenges of Community Tracing of HIV Positive Women who Disengage from PMTCT in Uganda**

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**Background:** The success of WHO recommended option B+ depends on ART uptake and retention during pregnancy and postpartum. Disengagement by HIV-infected mothers leads to unfavourable outcomes for both mother and infant. We set out to trace disengaged women (DW) from care in order to ascertain outcomes of both mother and baby. While in the communities, we encountered several confronts and sought to understand the ethical challenges encountered during community tracing of HIV positive DWs' in Ugandan communities.

**Methods:** A prospective study was carried out in peri-urban communities in Uganda on HIV-infected women who initiated ART during pregnancy. A team of outreach workers traced the DW through telephone-calls and home visits in the community for enrolment, and ascertained key outcomes. Traced DW were encouraged to re-engage in care. Tracers were asked to document any challenges encountered during tracing as well as reasons for non-enrolment of women and or infants traced in the community.

**Results:** Between July 2017 and July 2018, 347 DWs' were identified from the facility electronic health records. Tracing in the community proceeded for 347 DW and successfully enrolled 100 (28.8 %) women. While in the community, tracers encountered several ethical challenges as well as devising possible solutions as listed below; **i)** Lack of a conducive environment for research activities- *Tracers used secluded places*, **ii)** Ensuring participant confidentiality while in the community- *Tracers disguised as representatives of other health programs and only discussed study details upon attaining the rightful person*, **iii)** Impartial witnessing during informed consent process for illiterate participants- *Independent health workers utilised as impartial witnesses*, **iv)** Mother with undisclosed HIV status absent but baby found with Caretaker- *Tracers encouraged care takers to take infants for immunisation and HIV testing*.

**Conclusion:** We encountered ethical challenges during community tracing of mother-baby pairs from HIV positive women receiving ART. Research activities that involve such vulnerable populations should devise ways of handling ethical challenges that pose great risks to HIV positive mothers and their infants.

## **WEPEC170**

### **Implementation of a Safety Protocol within a Randomized Controlled Trial to Support HIV-positive Adolescent and Young Adult Victims of Violence in Ndola, Zambia**

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**Background:** Consideration of ethics and risk management is essential when conducting research on violence against people living with HIV, but little guidance exists on how to develop and implement a safety protocol for adolescents and young adults (AYA). We examined implementation of a safety protocol for a randomized controlled trial of a peer-mentoring intervention for AYA living with HIV (aged 15-24 years, 60% female) in Ndola, Zambia.

**Methods:** AYA reporting severe violence, suicidal ideation, or other serious concerns during surveys or peer mentoring sessions were referred to designated healthcare providers (HCP) at four HIV study clinics. Mixed methods were used to assess three implementation outcomes of the safety protocol: acceptability, appropriateness, and feasibility. Trial surveys and a database tracked characteristics of AYA and referral types. Questions about experiences with the safety protocol were incorporated into in-depth interviews (IDIs) with 82 AYA, 10 HCP, and 8 peer mentors, and 6 referral-specific IDIs were held with study staff.

**Results:** Almost half (45%) of the 276 AYA enrolled were referred at least once (62% female). Of 156 total referrals offered, 87% (n=136) resulted in a HCP meeting. Referrals were most often made for sexual violence (39% male; 33% female), suicidal ideation/depression (28% male; 29% female), and physical violence (16% male; 18% female). In IDIs, all peer mentors, all HCP, and 29 AYAs discussed experiences with the safety protocol. Interviewees largely deemed the protocol appropriate, since implementation took place at clinics where HCP are present to address violence and suicidal ideation. Acceptability was high among HCP, who gained greater appreciation for the challenges facing AYA, and moderate among AYA, some finding referrals valuable and others expressing concerns about confidentiality/stigma. Evidence for feasibility was mixed, given variation in waiting times and HCP interactions.

**Conclusions and Recommendations:** It is critical that researchers incorporate safety planning into their studies with HIV-positive AYA, given the large numbers of referrals made for violence and suicidal ideation and the highly-strained systems in which HCP work. Findings reveal key successes and challenges of implementing a safety protocol. These findings should inform not only future research studies but also treatment services for HIV-positive AYA in resource-limited settings.

**violence, safety, youth, ethics, Zambia**

## WEPEC171

### Estimating the Contribution of Key Populations towards HIV Transmission in South Africa

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**Background:** Key populations (KP), such as female sex workers (FSW), their clients and men who have sex with men (MSM) are often assumed not to contribute substantially to more generalised HIV epidemics, such as Republic of South Africa (RSA), despite their HIV burden and unmet prevention needs.

**Methods:** We developed a dynamic HIV transmission model among FSWs, their clients, MSM, and the general population in RSA; parameterised and calibrated with demographic, behavioural and epidemiological data from national surveys and multiple KP surveys. We estimated the contribution of unprotected (either due to lack of or partial effectiveness of ART or prevention interventions, e.g. condoms or male circumcision) commercial sex, sex between men, or heterosexual sex for different groups to overall HIV transmission over 10-year periods. We also estimated HIV infections averted per person-year (IA/py) of intervention over 2019-2030 from scaling-up PrEP (40% coverage) or ART (90:90:90 UNAIDS target) among different sub-populations.

**Results:** Unprotected sex between FSWs and their paying clients, and clients with their non-paying partners contributed 15.3% (95% credibility interval 8.7-26.0%) and 64.7% (45.3-75.0%) of new HIV infections in RSA over 2009-2019, respectively. Unprotected sex between low-risk groups contributed 35.2% (24.8-57.4%) of new HIV infections and sex between MSM and their partners contributed 6.1% (4.3-15.6%).

Over 2019-2030, scaling-up ART is most efficient among FSWs, their clients or MSM, with 1.2 (0.5-7.6), 0.3 (0.2-0.4) or 0.2 (0.1-0.2) IA/py on ART and only 0.08 (0.06-0.1) IA/py on ART if ART is scaled-up among low-risk individuals. PrEP is most efficient if focused on FSWs, with 0.4 (0.3-0.7) IA/py of PrEP, followed by 0.08 (0.04-0.11), 0.05 (0.03-0.06) or 0.01 (0.01-0.01) IA/py of PrEP for MSM, clients or low-risk individuals, respectively. Lastly, the largest population-level impact is achieved from targeting ART to clients of FSWs (18.3% (11.6-19.5) of IA by 2030) or low-risk individuals (21.4% (16.3-24.9) of IA by 2030).

**Conclusions and Recommendations:** Clients of FSW represent an understudied and underserved population that play a fundamental role in HIV transmission dynamics in RSA. Even in the context of more generalized HIV epidemics, addressing the HIV prevention and treatment needs of specific KPs can also avert downstream infections. This may be central to a comprehensive and an impactful HIV prevention and treatment response in RSA.



## **WEPEC172**

### **Strengthening the Capacity of Adolescents and Young People in Accessing HIV and Sexual Reproductive Health and Right (SRHR) Information's and Services in FCT Nigeria**

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**Issues:** Adolescents Sexual Reproductive Health (ASRH) has been overlooked historically despite the high risks that countries face for its neglect. The challenges faced by Adolescents include Social- Cultural factors restrict the delivery of HIV and SRHR information, Healthcare workers often act as a barrier to care by failing to provide Adolescents and young people with supportive, Youth-appropriate services among AYPS have created a heavy burden in the tackling of associated health issues.

**Description:** The support Group is a safe space where trust is built. Difficult issues are discussed, and fears and worries safely addressed on HIV and SRHR information's and Services. One of the roles Youth Advocacy Group (YAG) played in the implementation of the project is the facilitation of support Group meetings which manual was developed to serve as discussion Guide, it enable the YAG to continue to develop skills and to train AYPs in the following areas: SRHR and Rights violation Redress, leadership and communication, positive Health, Dignity and prevention positive living among Others.

AYPS living with HIV and AYPS who are not living with HIV between the age of 12-24 years in and out of School who are vulnerable.

The SG was a Six 6 month's programme which was conducted by 15 YAG each consisting of 15 AYPs, one hour-thirty minutes long sessions each Month in a safe environment.

The SG participants will initially investigate their own grievances and ideologies across different topic areas, before identifying common values. Specific activities include: Role -Play of real life situations putting new strategies of Accessing HIV and SRHR services, objective specifies the goal of each session and what knowledge or information participants are gained at the end of the session.

**Lessons learned:** (SRHR) are information we must provide to AYPS in other to mitigate unsafe sex, STI, pregnancy, unsafe abortion, Stigma and discrimination, Gender violence, Drug Use and Abuse among this target populations. Low knowledge of this information's is creating more burden rather than solution to the health of these AYPs. This in turn burdens the health sector, not just in FCT, Nigeria and the world, 30 human success stories where shared.

**Next steps:** It is therefore paramount that efforts aimed at addressing these gaps and challenges are made, SG discussion for AYPs should continue for more knowledge to pass across the AYPs in the societies as it will greatly impact on the SRHR and its outcome.

## WEPEC173

### Modeling Impact of Interventions for People who Inject Drugs in Dar es Salaam, Tanzania

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**Background:** People who inject drugs (PWID) in Dar es Salaam, Tanzania, have high HIV and hepatitis C virus (HCV) prevalence. Harm reduction interventions (HR: needle and syringe programmes (NSP) and opioid substitution therapy (OST)) have existed in Dar es Salaam since 2011, with antiretroviral treatment (ART) being scaled-up since 2004. We model the impact of existing and scaled-up interventions among PWID in Dar es Saalam.

**Methods:** We developed a dynamic HIV and HCV transmission model amongst PWID, calibrated to data from Dar es Salaam on trends of HIV (~30% and ~67% in male and female PWID respectively in 2011) and HCV prevalence (~16% in PWID in 2017), coverage of HR interventions, and ART coverage among PWID (63.1% in 2015). We evaluated the impact of existing interventions and the impact by 2030 of scaling-up OST from 23.7% to 50% of PWID and NSP from 13.1% to 75% of PWID ('full HR') and HCV-treating 10% of HCV-infected PWID per year.

**Results:** The model projects HCV and HIV incidence are 13.3 per 100 person years (95%CrI:11.0-15.0) and 1.7 per 100pyr (95%CrI:1.5-2.1) in 2019, respectively. In 2019, 84.7% (95%CrI:80.9-89.1%) of HIV infections among females are due to sexual transmission, compared to 47.4% (95%CrI:36.4-59.5%) among males. Due to their existing low coverage, OST and NSP combined has had low impact on HIV and HCV transmission to date, averting 10.5% (95%CrI:8.0-12.8%) and 16.9% (95%CrI:14.4-20.0%) of HIV and HCV infections, respectively, since 2011. In contrast, ART (estimated 69.1% coverage in 2019) has averted 22.7% (95%CrI:20.5-25.6%) of HIV infections since 2004. Full HR is projected to reduce HCV incidence by 64.7% (95%CrI: 58.9-74.8%) and HIV incidence by 52.6% (95%CrI: 42.9-60.1%) over 2019-2030; ART alongside full HR will decrease HIV incidence by 58.9% (95%CrI:50.6-65.3%). Only by scaling up to 'full HR' with ART and interventions to decrease sexual risk (by 75%) are larger reductions seen - 89.3% (95%CrI:87.7-90.7%) over 2019-2030. If HCV treatment is introduced alongside 'full HR', HCV incidence could decrease by 84.9% (95%CrI:82.1-89.6%) by 2030.

**Conclusions and Recommendations:** Scale-up of harm reduction interventions with HIV and HCV treatment is urgently needed to move towards eliminating HCV and HIV among PWID in Dar es Salaam.

## **WEPEC174**

### **HIV Electronic Platform: Une Plateforme Mobile pour une Meilleure Prise en Charge des PVVIH à Madagascar**

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**Issues:** L'accès au soin est difficile pour les PVVIH dans les zones enclavées, loin des centres de référence de prise en charge ainsi que la réalisation de formations continues pour les personnels de santé dans ces zones. Pourtant, la couverture réseau et internet peut atteindre plus de 80% des malgaches, d'où l'intérêt de mise en place d'une plateforme mobile pour une meilleure prise en charge des PVVIH à Madagascar.

**Descriptions:** La plateforme HELP est un Portail web qui donne accès à un service multicentrique dont chacun correspond à une application installée en backoffice. L'application DME (Dossier Médical Electronique) sert à numériser et centraliser les données cliniques afin de promouvoir une prise en charge en réseau des PVVIH. L'application e-VIH permet d'organiser des formations continues à distance et des échanges numériques entre les Médecins et les Services centraux de lutte contre le VIH/Sida à Madagascar. Ce projet piloté par l'Association Aide et Soins aux Malades (ASM) en collaboration avec l'Association du Personnel de LARTIC (APL) a duré 6 mois. 45 Médecins référents en charge des PVVIH ont été dotés chacun d'une tablette tactile connectée. Ils ont été formés ensuite sur l'utilisation des applications DME et e-VIH. Durant six mois de mise en œuvre, le système e-VIH a enregistré 50 sujets de partage d'expériences, 19 cas de téléconsultation et 16 sujets de discussions avec le Service Central et 02 cours en ligne sur la co-infection TB/VIH et sur la Peau et VIH ont été organisés. L'application DME a enregistré 100 dossiers créés par les Médecins eux-mêmes de manière indépendante.

**Lessons learned:** De manière générale, la plupart des Médecins n'ont pas rencontré d'énormes difficultés dans la manipulation des tablettes et l'utilisation des applications. Pendant la mission de supervision, les Médecins ont demandé que les dossiers cliniques déjà existants doivent être saisis par une tierce personne pour un gain de temps.

**Next steps:** Un élargissement de l'accès à cette plateforme mobile est en cours afin que beaucoup plus de médecins référents puissent y intégrer. Les formations médicales continues à distance seront renforcées (beaucoup plus de cours en ligne)

**Mots-clés:** Dossier Médical Electronique ; Plateforme électronique ; VIH ; PVVIH

## WEPEC175

### **Active HIV Case-based Surveillance System Model: Merging Partner Notification Services and Routine Case Surveillance in Rwanda**

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**Issue addressed:** Rwanda is close to reaching HIV epidemic control. Finding and retaining people-living-with-HIV, (PLHIV) is key to this goal. Only using passive methods to find PLHIV and retain them on anti-retroviral therapy (ART) is no longer effective.

**Description:** This active case-based surveillance system (Active CBS) has two components: active case finding and routine case surveillance. Active CBS uses patient-level data to identify new cases and monitor the patient's health status over time and across facilities. Active CBS provides data needed to identify trends for PLHIV, such as: who is being infected; where new diagnoses are concentrated; how new diagnoses were acquired; and, provide alerts to clinicians regarding the patient's health. In October 2018, Active CBS was implemented at 23 health facilities in Kigali. Staff were trained in case finding strategies, partner notification and completing data collection forms, paper-based and electronic. Since deployment over 1200 index case records have been created. The process consists of the nurse capturing index case related data in four forms; the index case register, partner contact modality, contact outcome, and the patient record. Then the nurse/data manager enters index case data into an electronic case report form (eCRF). Using a national-level unique patient identifier, individual patient data is appended at each clinical visit. The system has been successful in monitoring partner notification services and surveilling index case networks and on-going treatment.

**Lessons learned:** This process has provided insights regarding capture of data from paper-based into electronic form. The data entry lag into the eCRF is a barrier. Nurse/data managers view data entry as an additional burden, but view partner notification services data as helpful in finding new PLHIV. The partner notification services resulted in a 1:1.8 index-to-partner ratio and a 9% yield of new HIV positives. Analysis from the treatment continuum has indicated that men are coming into treatment later with lower CD4 counts.

**Next steps:** Currently we are transitioning to a digital platform that provides validation of the unique patient identifier, collects the index case partner notification services data, exchanges the laboratory related data electronically and has a dashboard to provide routine analytics and health care provider alerts. We are planning to rollout the Active CBS system to additional health facilities throughout Rwanda.

## WEPEC176

### Study on the Estimate of the Size of Key Populations Men Having Sex with Men, their Characteristics, and Mapping in Algeria, 2019

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**Background:** Algeria has a national strategic plan for STI / HIV / AIDS 2016-2020, ; The main objective of the study is the estimation of the size of the MSM population, determine the characteristics of the MSM population, and to geographically map the access areas of this population.

**Methods:** This is a cross-sectional descriptive study. Mapping and size estimation of MSM concerned four wilayas of Algeria: Oran, Algiers, Tamanrasset and Annaba. The enumeration method is used to estimate the size of the MSM population .The tools of this estimation were the focus groups discussions to determine the exhaustive list and the list of visited sites stratified according to the type and nature of the site, geographic mapping, and virtual mapping. GPS data was collected to geo-refer the different sites. In order to make estimates of the size of the MSM population two methods were used: Extrapolation, and adjustment

**Results:** The study identified 95 MSM gathering places in Oran, 71 in Annaba, 30 in Tamanrasset, and 124 in Algiers. MSM are identified mostly in Oran and Annaba in places of entertainment, in Tamanrasset in the streets and outdoor area, and in Algiers in social places. The total number of MSM observed during these visits (i.e. "initial accounts") was 570 in Oran, 428 in Annaba, 104 in Tamanrasset and 1245 in Algiers.

The estimated number of MSM ranged from 7501 in Algiers, 2340 in Annaba and 847 in Tamanrasset. Percentages of population range from 0.75% in Algiers, 1.11% in Annaba and Oran and 0.7% in Tamanrasset.

**Conclusions and Recommendations:** This study conducted size estimates based on mapping at strategic locations in Algeria in order to develop local and national estimates of MSM in urban areas in the country. While approaching the number of MSM in most of the countryAverage number of sexual partners in the month preceding the survey: 18 different partners. Most MSM did not connect (99%) to websites or location-based applications to meet partners. The most used website by MSM is the Facebook (56.8%), followed by Grindr (39%), while Manjam represents only (0.2%). MSM are mostly connected at night (52.2%), versus (26.8%) during the day, and (20.9%) in the morning, the estimates presented here should be useful for programmatic purposes (for example, setting awareness and prevention objectives targeting those present on the sites and websites of MSM) and for modeling the trajectory of the HIV epidemic.

## **WEPEC177**

### **Estimation of the Size of the Sex Workers and Mapping in Algeria, 2019**

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**Background:** Due to a lack of measurement and accurate estimation, Algeria is not able to carry out programmatic activities to combat the HIV epidemic. The objective of our study is to estimate the size of the SP population, to geographically map the access areas of this population and to determine their characteristics

**Methods:** This is a cross-sectional descriptive study, which was held in four wilayas of Algeria: Oran, Algeria, Tamanrasset and Annaba.

The enumeration method was used to estimate the size of the workers sex population, the count is done on the basis of their appearances and behaviors.

The tools of this estimation are geographical mapping and focus group discussions in which the final result is the exhaustive list of access sites and the list of visited sites stratified according to the type and nature of the sites.

Statistical adjustments and extrapolations are used for the analysis. Data on the characteristics of SPs are collected through a pre-established questionnaire on tablets, then transferred by a server to Excel and SPSS for analysis.

**Results:** In total we identified 313 sites including 108 PS gathering places in Oran, 72 in Annaba, 35 in Tamanrasset, and 98 in Algiers, most hotspots were fixed sex sites such as hotels and meeting houses, followed by other sites such as tea shops and cafeterias, on average, the largest number of SPs were identified in fixed sex sites (MDR) in Tamanrasset and in entertainment venues such as bars and clubs in Oran and Annaba. The estimated number of SP ranges from 2249 in Algiers, 1852 in Oran, 1131 in Annaba and 272 in Tamanrasset. The corresponding percentages relative to the proportion of women aged between 18 and 49 range from 0.27%, 0.35%, 0.64 % and 0.51% respectively. The national estimate of the size of SP is 35158 SP, of which 0.35% of the female population aged 18-49 years.

**Conclusions and Recommendations:** By improving the capacity of local associations working with peer educators in terms of access to these populations, especially those that are not accessible on physical sites or websites, improve awareness of hidden populations so that they are accessible for the next estimate, improve data associations so they can be used in future estimates and on the strategic planning plan, this estimate of the size of the key populations, will be used to prioritize the geographic priorities of interventions

## **WEPEC178**

### **Population Size Estimation of Men who Have Sex with Men in Nigeria: Implications for HIV Programming**

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**Background:** The 2014 integrated biological and behavioral surveillance (IBBS) study has reported that HIV prevalence is highest among men who have sex with men (MSM) compared to other key populations in Nigeria. MSM are in dire need of focused prevention services, hence having up-to-date data on estimates and distribution of MSMs is therefore critical to provide a reliable denominator and inform the development, implementation and monitoring and evaluation of interventions among these groups.

**Methods:** Programmatic mapping was used to estimate the size of MSMs in 10 purposively selected states which include: Abia, Anambra, Enugu, Imo, Edo, Oyo, Kaduna, Kano, Gombe and Taraba. It involved two sequential steps (L1 and L2). L1 step involved the process of gathering information from key informants (KI) regarding the locations where MSMs congregate and/or meet casual or paying sexual partners. L2 step involved site validation and profiling of identified "hot spots" to characterize and estimate their size. Data was analyzed using descriptive statistics to report number and proportions for this population, disaggregated by states.

**Results:** A total of 4349 active MSM hot spots were identified from the 10 states. The highest proportion (46%) of active hotspots was seen in Kano state. Five out of ten states reported the most common typology of MSM hotspots as Hotel and lodge followed by streets/ toilets and open spaces from 3 out of 10 states. Estimated number of MSMs across the 10 states was 44,355 and 63% of them sell sex. Kano state having the highest estimate of MSMs (45%) and Taraba state had the least (2%). MSM in Kano, Kaduna, Oyo and Anambra states represent 85% of estimated number of MSMs. Findings showed that in all the states except for Gombe, at least 80% of MSMs visit the hotspots on Sunday. Peak time of MSM activities at physical locations were in the evenings (5 p.m-9 p.m) across all the states except for Gombe and Enugu state that reported a peak time of 9 p.m to late at night.

**Conclusions and Recommendations:** There is a need to focus HIV prevention programming in states with highest estimates and ensure that there are increased program efforts around education and information targeting men who sell sex, as they have higher risk of contracting and transmitting HIV.

**Keywords:** MSM, Nigeria, Population

## **WEPEC179**

### **Evaluation des Besoins en Formation des Acteurs de la Lutte Contre le VIH sur la Localisation et l'Estimation de Taille des Populations Clés en Afrique de l'Ouest**

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**Contexte:** En Afrique de l'ouest et du centre, l'un des principaux défis de la lutte contre le VIH est la mise en place de stratégies cohérentes pour atteindre les 90-90-90. Cela passera par la disponibilité de données plus précises et localisées sur les populations clés.

L'objectif de ce travail était d'évaluer les besoins en formation ressentis des acteurs de la lutte contre le VIH en faveur des populations sur les outils de localisation et l'estimation de taille.

**Méthode:** Une enquête descriptive a été menée auprès des acteurs de la lutte contre le VIH, à travers un questionnaire auto-administré en ligne.

La méthode de diffusion du questionnaire consistait à envoyer le lien à des professionnels connus ayant les caractéristiques recherchées et de leur demander d'indiquer ou de le diffuser à leur tour à des profils similaires dans les quatre pays cible du projet (Côte d'Ivoire, Guinée Bissau, Guinée Conakry et Sénégal). Les réponses ont été compilées et des analyses descriptives réalisées avec des tableaux de fréquence, des tableaux croisés et des graphiques à l'aide du logiciel SPSS.

**Résultats:** 173 individus ont répondu au questionnaire, dont 68,2 % d'hommes. 58,4% des répondants était âgés de 30 à 45 ans.

Neuf profils professionnels ont répondu au questionnaire d'enquête dont les plus représentés sont : travailleurs sociaux (20,8%), les leaders ou membres d'associations de populations clés (20,8%) et les personnels médicaux/paramédicaux (17,9%) chargés de projets/programmes (11,6%), directeurs de structures/organisations (9,8%).

70% et 71,6% des répondants ont peu ou aucune notion sur la cartographie et l'estimation de taille respectivement. 2,9% des enquêtés, affirment avoir reçu une formation sur la cartographie. 11% ont au moins une fois reçu une formation sur l'estimation de taille des populations.

80,92% et 76% pensent avoir toujours besoin d'être formé sur la cartographie et l'estimation de taille respectivement.

**Conclusion:** En définitive, plusieurs besoins en formation ressentis ont été identifiés chez les acteurs de lutte contre le VIH en faveur des populations clés. Ces besoins en formation intègrent les domaines de la localisation, de l'estimation, de l'évaluation, de la gestion et analyse qui peuvent aider dans le processus de changement et de la prise de décision, et feront l'objet de sessions de formation pour les acteurs



## **WEPEC180**

### **Are the Drug Bunks Generally Known as Location to Target People who Inject Drugs for HIV Prevention Activities? Experience from Key Population Size Estimation Study Enugu State, Nigeria** Olufunke Adewoyin<sup>1</sup>, Fajemisin Dr.Wole<sup>2</sup>, Ayewah Osas<sup>3</sup>

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**Issues:** People who inject drugs (PWIDs) are amongst the key population including the Men who have sex with men (MSM) and female sex workers (FSW), who continue to contribute significantly to the prevalence/spread of HIV in Nigeria; the prevalence of HIV infection among PWIDs (3.4%) is higher than the general population (UNAIDS data 2018). Identifying the estimated numbers and location they operate is a key consideration in programmatic planning, implementing and evaluating HIV prevention interventions tailored to the PWIDs. To identify the location and population size of PWIDs, the Global Fund HIV project in Nigeria conducted a programmatic mapping and size estimation study in Enugu and 9 other states in 2018.

**Descriptions:** A total of 14 trained data collectors conducted 2,546 key informant interviews across the 17 local government areas (LGAs) in Enugu State and the study lasted for forty-five days. Secondary Key informants (KIIs) including, Drug peddlers, night club bouncers, health service providers, recovering addicts, bar men, hotel operators, security guards, were contacted for interview regarding the size estimate and location of PWID hotspot based on their knowledge and experience. A list of mentioned 1506 hotspots was compiled. Each hotspot was visited and PWID at each of the hotspot was interviewed to validate the information provided by secondary KIIs; PWIDs were found to congregate at 1196 of the spots. It was found that 8.1% PWIDs congregate in public toilets, open canal and drains, 2% at home, 7.5% in bar, casinos, and nightclubs, 4% operates from hotels, 4.2% were sited at trailers parks, 68.2% congregate at cemetery and abandoned buildings while 6% congregate in drug bunks. It was evident that 15% and 85% of PWIDs seen at this spots were females and males respectively. While 16.5% PWIDs share needles in the various spots visited.

**Lessons learned:** HIV prevention activities targeting PWIDs should not only be limited to drug bunks but other locations should be explored since more populations of these group congregate to buy, inject drugs and meet sex partners within these locations. Access to services such as disposal and replacement of needle, condom programming, HIV testing and treatment should be made available in these locations.

**Next steps:** Understanding location and population size of PWIDs are required when planning any interventions because interventions targeted at general population or other key populations may not reach PWIDs or influence their behavior.

## **WEPEC181**

### **Key Population Size Estimation in Kenya 2018**

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**Background:** The expansion of the Key Population (KP) program and dynamics within KP in Kenya necessitate periodic validation of KP hotspots to understand where KP can be reached and estimate how many KP are there in the hotspots. The Kenya AIDS Strategic Framework 2014/5 - 2018/19 recommend conducting regular estimation of KP for effective planning and resourcing.

**Methodology:** In 2018, the National AIDS and STI Control Programme (NASCOP) in collaboration with County Ministry of Health led KP estimation in 34/47 counties. Technical support was provided by University of Manitoba and University of California San Francisco. The estimation was conducted by 45 KP implementing partners (IPs). IPs were trained by NASCOP to conduct the estimation using programmatic mapping approach. IPs developed a master list of known KP hotspots disaggregated by KP typology i.e. Female Sex Workers (FSW), Men who have Sex with Men (MSM) and People who Inject Drugs (PWID). This process also estimated number of transgender (TG) male and females, Male Sex Workers (MSW), KP below 18 years FSW, MSM and PWID, Female PWID and people who use drugs in the mapped hotspots. Data quality was managed through county-level KP technical working groups and compiled by NASCOP for dissemination.

**Results:** For participating counties, a total of 10,250; 1,729; 401; and 1,202 hotspots were mapped for FSW, MSM, PWID and TG respectively. Majority of the hotspots for FSW (81%) and MSM (64%) were bars with and without lodges and for PWIDs were streets and Injecting dens (70%). 167,940 FSWs; 32,580 MSM; 16,063 PWIDs; and 4305 TG were estimated in the participating counties. Around 9% of all the KPs in the hotspots were below the age of 18 years; 15% of PWID were women and 36% of MSM were MSW.

**Conclusion:** This estimation provided new, updated estimates and new evidence for resource allocation, planning of interventions and programmatic targets. The exercise also for the first time provided data on young KP, female PWIDs, MSWs and TG. Programmatic mapping continues to be a useful tool for helping programs achieve high levels of program coverage and prioritizing limited resources. However, the exercise did not include those KP who do not visit the hotspots.

## **WEPEC182**

### **Estimation de la Taille et de la Prévalence de la Population des Personnes qui Consomment des Drogues (CD) ou qui s'Injectent des Drogues (PID) le Long du Corridor Abidjan-Lagos**

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**Contexte:** Dans le cadre de la mise en œuvre d'un projet de réduction des risques chez les CD et PID, l'Organisation du Corridor Abidjan-Lagos(OCAL) a conduit une étude.L'objectif est d'estimer la taille et la prévalence de l'infection par le VIH chez les CD en général et les PID en particulier au niveau des huit (8) sites frontaliers le long du corridor Abidjan-Lagos

**Méthodes:** Il s'agit d'une étude transversale à visée programmatique. Des données quantitatives (bio comportementale incluant des paramètres d'estimation de taille) ont été collectées à partir de la méthodologie RDS (échantillonnage déterminé par les répondants)

Cette étude a couvert les huit (8) sites frontaliers le long du corridor Abidjan-Lagos. Il s'agit de Noé (frontière Côte d'Ivoire-Ghana), d'Elubo (frontière Ghana-Côte d'Ivoire), Aflao (frontière Ghana-Togo), Kodjoviakopé (frontière Togo-Ghana), Sanvee Condji (frontière Togo-Bénin), Hillacondji (frontière Bénin-Togo), Kraké Plage(frontière Bénin-Nigéria) et Sèmè (frontière Nigéria-Bénin). Elle a été menée au cours de dernier trimestre 2017.

La population de l'étude a été essentiellement constituée de CD et de PID.

**Résultats:** L'estimation de la taille des populations de CD qui se socialisent sur les sites, varie selon le type de répondant et la catégorie du site. Suivant le type de répondant, elle est de 1408 selon les gérants de site contre 1315 selon les estimations faites par les CD/PID sur les sites.

L'estimation de la taille de la population des CD et PID dans les huit (8) villes transfrontalières le long du corridor Abidjan-Lagos selon la méthode du « multiplicateur objet unique » est respectivement de 8943 CD et de 1843 PID(43 à Noé, 38 à Elubo,30 à Aflao, 179 à Kodjoviakopé, 120 à Sanvee Condji, 416 à Hillacondji, 318 à Kraké et 699 à Sèmè.

Sur la prévalence du VIH, 41 cas positifs ont été enregistrés dans l'échantillon final (1936). Après pondération pour prendre en compte la méthode d'échantillonnage, une prévalence pondérée de 2,1% parmi la population de consommateurs de drogues dans les huit (8) sites frontaliers le long du corridor Abidjan-Lagos a été obtenue.

Bien que la prévalence moyenne globale chez les CD soit de 2,1% (1,8%-2,5%), on observe également des variations au sein des groupes spécifiques

**Conclusions:** Cette étude a permis d'avoir une idée précise de la taille des CD/PID, leur prévalence VIH le long du corridor Abidjan-Lagos, afin de planifier les activités du projet pilote de réduction de risque chez les CD/PID

## **WEPEC183**

### **Involving Key Populations Led Community Base Organization (CBO) in Locating Key Population for Programming. Experience from Enugu State, Nigeria**

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**Issues:** The key population including the Men who have sex with men (MSM), female sex workers(FSW),and people who inject drugs (PWID) continue to contribute significantly to the prevalence/spread of HIV in Nigeria; the prevalence of HIV infection among the key population is higher than the general population (IBBSS 2014). Identifying the estimated numbers,location and time they operate is a key consideration in programmatic planning,implementing and evaluating HIV prevention interventions tailored to the key populations.To identify the location, presence, population size and access to HIV services of MSM in Enugu,the Global Fund HIV New Funding model project in Nigeria conducted a programmatic mapping and size estimation study in Enugu and 9 other states in 2018.

**Descriptions:** A total of 14 trained data collectors conducted 2,546 key informant interviews across the 17 local government areas (LGAs) in Enugu State and the study lasted for forty-five days. Secondary Key informants (KIIs) including, network of Key populations,CBO staff, male food vendors, health providers,students,bar men, hotel operators, security guards, were contacted for interview regarding the size estimate of the population and location of MSM hotspot based on their knowledge and experience. A list of the mentioned 1799 hotspots was compiled. Each hotspot was visited and MSM at each of the hotspot was interviewed to validate the information provided by secondary KIIs; MSM were found to congregate at 296 of the spots. It was found that 97% of the 296 MSM hotspots mentioned by Key population CBOs were operational and the information provided on the average number of MSM seen at the hotspot and time of operation were accurate when compared with information obtained from non-community base members around the venue.

**Lessons learned:** Key population led community base organization are very knowledgeable about the location and timing of operations of the MSMs. Engaging them in identifying MSM hotspots will save time, financial resources and ease the initial identification of hotspot that precedes community level program implementation.

**Next steps:** For comprehensive coverage of scope and depth of Key populations in intervention communities, HIV prevention programs should consider involving key population led community base organizations in locating venues of operation of MSMs. Involving them (Key populations) in community mobilization and direct implementation of HIV prevention activities can be piloted

## WEPEC184

### Time Trends in Socio-economic Inequalities in HIV Testing: Insights from Population-based Surveys in 16 Sub-Saharan African Countries

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**Background:** As antiretroviral therapy became increasingly available in most countries, uptake of HIV testing increased dramatically in sub-Saharan Africa. However, the overall increase in the uptake of HIV testing may have hidden discrepancies across socio-economic groups. We used population-based surveys conducted in sub-Saharan Africa to quantify socio-economic inequalities in recent HIV testing uptake, together with their trends over the past decade.

**Methods:** We analyzed the data from Demographic and Health Surveys in sub-Saharan African countries where at least one survey was conducted before and after 2008, i.e after the release of international recommendations to expand provider-initiated opt-out testing in 2008. Country- and gender-specific proportions of recent (< 12 month) HIV testing were assessed across wealth and education groups. Based on modified Poisson regression models, relative and absolute inequalities were quantified using the relative and slope indices of inequalities, to measure relative and absolute inequalities, respectively. Time trends in inequalities were assessed and results were pooled across countries using random-effect meta-analyses.

**Results:** We analyzed data from 32 surveys conducted between 2003 and 2016 in 16 countries among 537,784 participants. In pre-2008 surveys, women reported higher HIV testing uptake than men in 8 out of 16 countries, and in 15 out of 16 countries in post-2008 surveys. In relative scale in the later surveys, the wealthiest women were on average 2.69 (95% CI 1.39-5.23) times more likely to report recent testing than the poorest; and 3.53 (1.82-6.86) times in men. Meanwhile, in the absolute scale, the predicted proportion of recent testing was 11 percentage points (95% CI 5.0-18.0) higher in the wealthiest women as compared to the poorest. This absolute difference was estimated at 15 percentage points (95% CI 10.0-21.0) in men. Time trends analysis revealed that, overall, relative inequalities in recent HIV testing decreased in both genders; while, absolute inequalities plateaued in women and increased in men.

**Conclusions and Recommendations:** The overall increase in HIV testing uptake that was stimulated by the impetus to scale up HIV treatment in sub-Saharan Africa led to a decrease in relative inequalities, while absolute inequalities persisted. Within most countries, large inequalities still remained both in absolute and relative scales, especially in West and Central Africa. A greater focus should be put on equity in monitoring HIV testing programs.

**Keywords:** HIV testing, socio-economic inequalities, trends

## **WEPEC185**

### **Mobilisation et Dépistage Familial et Cas Index du VIH dans le Site de Dispensation Communautaire des ARV District de Santé de Biyem Assi Yaoundé Cameroun (No Limit for Women Project)**

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Le grand gap du traitement pédiatrique motive de nouvelles stratégies et approches de la recherche active de cas et lien au traitement: 50% des enfants VIH+ mourront avant l'âge de 2 ans et 75% avant l'âge de 5 ans s'ils ne reçoivent pas le traitement. Les membres de l'association à chaque contact avec les patients présentent les intérêts à connaître le statut sérologique des autres membres de la famille. Le dépistage familial et cas index est une stratégie importante pour identifier les enfants biologiques, partenaires et autres membres de la famille souvent perdus dans le système de santé.

**Methodologie:** Sensibilisation des PvVIH sur le dépistage familial et cas index

Identification et recrutement des enfants biologiques, partenaires et autres membres de la famille pendant la dispensation des ARV, les VAD et séances de réunion des groupes de parole et GS.

Remplissage de l'arbre généalogique.

Prise de rendez vous pour le dépistage familial du VIH et cas index ou le faire immédiatement si possible.

Rendu des résultats et référence physique des PvVIH pour la mise sous TARV immédiatement.

Synchroniser les rendez vous des familles pour l'amélioration de la rétention.

**Resultats:** Pendant 04 mois en 2018 dans ledit site de dispensation, nous avons fait le dépistage familial et cas index du VIH à partir de notre cohorte. De cette activité, il ressort les résultats suivants : sur 169 femmes dépistées, il y a eu 4 cas positifs dont 01 enfant de 1 - 4 ans, 02 jeunes femmes de 20 - 24 ans et 30 -34 ans. Ensuite, sur 120 hommes dépistés, on a eu 01 seul cas de positif dont 01 enfant de moins de 1 an par PCR.

**Leçons Apprises:** Le dépistage familial et cas index dans les sites de dispensation communautaire des ARV est une stratégie efficace de recherche active du VIH pédiatrique et autres membres de la famille. Le lien au traitement est bien réussi et facilité au niveau de la formation sanitaire. L'harmonisation des rendez vous de dépistage familial du VIH et cas index à l'aide des dossiers communautaires

Contrôle et assurance qualité par la FOSA tutrice

Fort système de gestion des intrants par semaine

Supervision régulière et mentoring par les FOSA tutrices et le staff de l'OBC.

Cette approche est faisable et acceptée par les patients et leurs familles. Il est important de développer clairement la complémentarité entre les services de santé et la contribution des OBC pour renforcer le dépistage familial à partir des cas index au niveau communautaire.

## **WEPEC186**

### **Le Dépistage et la Prise en Charge Médicale à Vih/SIDA un Défis Majeurs dans la Zone Minière de Kamituga pour les Travailleuses du Sexe Autochtones et Immigrées dans l'Est de la RD Congo**

Aimée Mlle, Nshombo Furaha Aimée

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**Background:** La ville de Kamituga situé dans l'Est de la RD.Congo à 175Km de la ville de Bukavu. Cité minière créé par la Belgique vers les années 1880, pour abriter la société minière du Kivu, SOMINKI. Depuis vingt ans, la ville de Kamituga est laissée à l'exploitation artisanale d'Or ou se côtoyant les creuseurs, les trafiquants, les commerçants et les négociants; Dans ce contexte le service sexuel est fortement sollicité, avec risque élevé d'infection à Vih/SIDA, la ville regorgent une importante communauté des femmes travailleuses du sexe autochtones mais aussi des immigrées (Rwanda et Burundi). Dans un contexte où le sexe se négocie avec de l'Or, rien qu'en 2018, on a dénombré 3901 travailleuses du sexe dont 1405 immigrées au Comités de solidarité d'UMANDE à Kamituga; 1764 travailleuses du sexe ont été atteint d'IST. *Comment porter le préservatif quand l'Or est proposé par un client?* UMANDE a initié le programme « CAPOTE POUR TOUS » depuis Décembre 2017, programme basé sur la réduction de la prévalence à Vih/SIDA et les IST.

**Methods:** Une étude comparative des résultats obtenus a été organisée dans la ville de Kamituga pour évaluer l'impact du programme « Capote pour tous ». Période : décembre 2017 - décembre 2018 sur un échantillon des travailleuses du sexe, (n=400), dont l'âge varie entre  $18 \leq 25 \leq 35$ ans.

#### **Results:**

##### **Décembre à Juillet 2018**

- 145 cas sur 2923 soit 4,9% de cas d'ISTs soignée à l'hôpital de Kamituga;
- 13 travailleuses du sexe mis sous Traitement anti rétroviral;
- 508 préservatifs distribués;
- 43 Travailleuses du sexe immigré continuent leurs Traitement Antirétroviral à Kamituga.

##### **Aout - Décembre 2018**

Système de référence et de contre référence mis en place par UMANDE

- 368 cas sur 371 soit 99,1% de cas d'IST soignée à l'Hopital Général de Kamituga;
- 216 travailleuses du sexe mis sous traitement anti rétroviral;
- 17491 préservatifs rendus disponible et distribué au sein des comités de solidarité;
- 115 travailleuses du sexe immigrée sous Traitement Anti Rétroviral à Kamituga.

**Conclusions and Recommendations:** Une croissance de 38% de fréquentation de services hospitalier de Kamituga par les travailleuses du sexe a été constatée. Besoin de l'accompagnement d'UMANDE pour l'acheminement de préservatif, des actions de sensibilisation permanente mais surtout de mettre en place des actions pour faire sortir les travailleuses du sexe dans clandestinité cause majeurs des viols et violences sexuelles; Et des IST-Vih/SIDA.

## WEPEC187

### **Achieving HIV Treatment for All: The Impact of Direct Escort Services on HIV Treatment Linkage from Community HIV Testing in South-East Nigeria**

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**Background:** Poor linkage and retention are major drivers of poor health outcomes, increased morbidity and deaths in persons living with in HIV/AIDS in Nigeria. Only about 33% of HIV positive individuals are successfully linked to HIV treatment facilities in the country. Directly escorting identified positive clients to treatment centers is one the efforts at reducing stigma and improving uptake of HIV treatment. The study examines the impact of direct escort services on linkage of identified HIV positive individuals to treatment facilities.

**Methods:** A retrospective cross-sectional data review of records from community HIV testing and referral services provided to 37,235 individuals across the 27 local government areas (LGAs) in Imo state Nigeria between February 2018 and May 2019 (16 months) was conducted. Statistical analysis was done using SPSS to calculate and show the prevalence rates from community testing in the state, as well as the referral completion rates from points of community HIV testing to treatment centers.

**Results:** Generally, more males were tested than females (rate ratio: 1.507; 95% CI = 1.379, 1.635) with an overall prevalence rate of 1.9% (95% CI = 1.6, 2.2). However, prevalence/positivity rates were higher in females - 2.8% (95% CI = 2.2, 3.4) than in males - 1.2% (95% CI = 1.0, 1.4). Overall, 94.4% of HIV positive person identified completed referral through direct escorts and accessed treatment services (95% CI = 92.2, 96.6). Referral completion rates were 93.5% for males (95% CI = 90.5, 96.4) and 95.0% for females (95% CI = 92.8, 97.2).

**Conclusions and Recommendations:** Directly escorting clients from point of HIV testing to the health facilities will support the drive on ensuring that at least 90% of HIV positive persons receive sustained antiretroviral treatment. Enduring strategies to improve and sustain escort services should be adopted to maximize treatment services and outcomes



## WEPEC188

### **Targeted HIV Index Patient Family Testing: An Innovative Approach to Fast Track Achievement of UNAIDS 90-90-90 Targets by Improving HIV Case Detection within OVC Program**

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**Issues:** Getting over 90% of people leaving with HIV to know their status in line with the UNAIDS 90-90-90 targets required a paradigm shift from the usual untargeted approaches to a more targeted approach. Despite the significant advances, made in pediatric and adolescents HIV programing, less than a quarter of eligible children are receiving ART in developing countries. Almost half of HIV-infected patients enrolled in treatment services had untested household members that required focused approach to get them tested. Hence, this study aimed at determining the yield of HIV case detection among children living in infected households.

**Descriptions:** Sustainable Mechanism for Improving Livelihoods and Household Empowerment (SMILE) project was implemented by a consortium led by Catholic Relief Services (CRS) with USAID funding. In view of the need to identified children at risk of HIV and increase case detection them, SMILE recognized that each new patient is part of a family/households that may be at risk of HIV. Between January-March 2018, SMILE piloted an approach called Targeted HIV Index patient family testing to increase case detection within the family tree of HIV infected individual's households in Nasarawa State. Community Volunteers use family information table (FIT) generated from NOMIS for the identification of family members at risk of HIV, facilitated their access to HIV testing, and enroll HIV-positive members on treatment.

**Lessons learned:** A total of 1941 infected households with 2200 HIV positive beneficiaries comprising of 88(4%) male and 2112 (96%). These 2200 index patient led to the identification of 17,820 vulnerable children less than 18 years of age at risk of HIV. After testing 464 (2.6%) children (M =226; F=238) were positive while 17,356 were negative (M =8233; F =9123). The findings show that the yield of HIV positive case detection through targeted testing among children living within infected households was 23.9%. However, the prevalence of HIV among children living in an infected household was found to be 2.6%.

**Next steps:** Targeted HIV Index patient family testing present an important window of opportunity to increase HIV case detection within the family tree of HIV infected individuals. This approach presents a unique insight to all HIV program seeking to increase HIV positive case detection among children as a strategy to achieving the UNAIDS 90-90-90 targets.

## **WEPEC189**

### **Peer to Peer Engagement to Promote and Scale up HIV Testing and Treatment in Huruma an Informal Settlement Area of Nairobi**

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**Issues:** HIV Testing and treatment, Referral to treatment and peer support.

**Descriptions:** Due to overwhelming challenges such as poverty, poor educational attainment, accessibility to addictive drugs expose the young people to early sexual debut, sexual coercion thereby heightening the risk for young people to be infected by HIV in Huruma area.

Nzumari Africa a youth led community based organization initiated a project to reach young people in the slum area using creative methodology to enable them get tested for HIV at a time and strategic locations where most young people are available in the community without necessarily having them going to a health centre. We worked closely with Adolescent and youth friendly service providers who accompanied the intensively trained peer educators in to the communities. The peer educators created awareness using music, dances and puppetry theatre which worked not only to mobilize and grab attention of the young people but also shared information on the importance of getting tested for HIV then referred them to service providers for testing and in depth information on HIV and AIDS. The young people who were found to be living with HIV were referred to a peer group leader who was living with HIV to help support him or her.

**Lessons learned:** Peer to peer engagement is effective and the young people should work closely with youth friendly health workers to refer the young people for information and services.

Use a gender transformative approach and lens to target young people of a specific gender because young people felt comfortable going to the peer educator of their gender.

It is crucial to make HIV testing accessible to young people by factoring the time that they are available.

Young people are in touch with the changing trends, understand what works for them therefore there is need to have dynamic flexible and innovative strategies in place to respond to be able to reach the hard to reach youths.

**Next steps:** Ensure that the projects are of high dosage not a one off engagement and peer led.

Have Adolescent and youth friendly services with a gender transformative lens.

## **WEPEC191**

### **Overtuning the Wheel for HIV Case Identification towards the Epidemic Control: Index Testing in Southern Zone Tanzania**

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**Issues:** Reaching HIV epidemic control needs active HIV case identification, access to HIV treatment, retention to care and optimal viral suppression. Tanzania is making a steady progress in reaching the 1<sup>st</sup> 90 (61%). In year 2017/18, Tanzania reached 159% and 80% of PEPFAR targets for HIV testing and positive identification, respectively. The progress for HIV case identification is slow irrespective of testing beyond target, thus need targeted HIV testing.

The USAID Boresha Afya Southern Zone project supports 516 health facilities in Tanzania to provide comprehensive HIV care and treatment services. The project implements index testing strategy to improve HIV case identification. The HIV Index testing involves HIV testing to family members of known PLHIV (index clients) who are at increased risk of HIV infection such as sexual partners and biological children of HIV mother. We present uptake of index testing from project facilities.

**Descriptions:** The project observed low performance in index testing and its contribution to total positives identified following analysis of October-December 2018 data. Therefore, in February 2019, some 40 facilities contributing 80% clients on HIV treatment were identified. The list of patients newly enrolled October 2018-January 2019 was developed. The project team engaged staff from selected facilities and volunteers to conduct intensive elicitation for sexual partners of index cases. These teams used phone and home visits to reach the sexual contacts of index. HIV counselling and testing was conducted by the health care providers at the client's convenience either at home or facility. Daily data was reported in the index registers and entered into the project database. Data analysis from the 40 facilities was done by comparing index yields and index positive cases contribution to total positives identified before intervention (October-December 2018) and after intervention (January -March 2019).

**Lessons learned:** A total of 3,613 individuals were tested for index, an increase of 78% from 2,032 in October-December 2018, HIV positivity increased from 11% to 32% ( $p < 0.001$ , 95% CI 18.9- 23.0). The contribution of all positives from index increased from 8% to 25% ( $p < 0.001$ , 95% CI 15.5-18.5). Index testing increased number of people testing for HIV and reaching the people need treatment.

**Next steps:** Scaling up of index testing at all levels of HIV services delivery to reach contacts of at higher risk clients for HIV transmission.

## **WEPEC192**

### **Uptake of Second HIV Testing among Pregnant and Lactating Women and Missed Opportunities of HIV Identification in Southern Zone, Tanzania**

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**Issues:** In Tanzania, the HIV prevalence at antenatal clinic (ANC) is 3.7%. The national program recommends second HIV testing during third trimester, at labor and delivery or anytime within 6 months postpartum when attending postnatal clinic. This is an opportunity to identify women who acquire HIV infection during pregnancy and postpartum and initiate them with HIV treatment and provide prevention services to protect the child/ren.

We evaluated uptake of second HIV testing among pregnant and lactating women and determine missed opportunity at facilities supported by USAID Boresha Afya Southern Zone in Tanzania.

**Descriptions:** We analyzed the data from the national database DHIS2 for 516 facilities supported by the USAID Boresha Afya program in Southern Tanzania. The data is for ANC attendance from October 2018 to March 2019. We computed the proportions of first HIV testing, positivity yield and second HIV testing among eligible ANC and postpartum clients. Based on the coverage gap, the missed opportunity for second HIV testing was calculated using the project current 2<sup>nd</sup> ANC HIV testing positivity rate of 1%.

**Results and Lessons learned:** During the reporting period, out of 78,426 women attended ANC for the first time, 2,620 (3.3%) were already HIV infected. 75,420 (99%) of women with unknown HIV status were counseled tested and received their HIV results and 1,743 (2%) were HIV infected. Second HIV testing was conducted to only 12,552 (17%) of 73,677 eligible women who tested HIV negative at ANC in their previous visits, and 181 (1.4%) were HIV infected. If all eligible women were reached, based on the positivity at hand then estimated 737 would be HIV infected, therefore a missed opportunity to identify 556 HIV infected women through 2<sup>nd</sup> HIV testing. Therefore second HIV test among pregnant and lactating women is low.

**Next step and Recommendations:** Second HIV test should be conducted during third trimester and postnatal to women who previous tested HIV negative at ANC. This will enable reaching those who were at window period and those who acquired new HIV infection after first test and provide them with ART for their health and preventing mother to child transmission (MTCT). HIV prevention package i.e. education, behavioral change and condoms should be provided to women who test negative during ANC to avoid new infections. All women should be advised to reach at least 4 ANC visits, attend postnatal clinic and receive second HIV testing as part of package of care.

## **WEPEC193**

### **Feasibility of Screening Young People for HIV-infection in Churches in a Rural Cameroonian Community**

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**Issues:** Many young people do not know their HIV status in sub-Saharan Africa where it is estimated that only 10% of young men and 15% of young women know their HIV status. In a rural community in Cameroon, we present a collaborative project that has successfully integrated HIV testing for youths into a youth life skills development programme run by youths themselves with support from various local government services and faith organisations. Young people make up the majority of church attendees on Sundays and thus an important target for screening.

**Description:** From 28 November 2017 to 6 December 2017, a multi-sectoral project was organised in the locality of Baré-Bakem in Cameroon to promote overall youth welfare. The health sector component involved awareness and voluntary, free and anonymous HIV testing in schools, churches, market squares and bus station. In the churches, the screening flow saw an awareness talk and pre-test collective counselling done during the Sunday service or mass, while HIV testing and post-test counselling were conducted immediately after the service in the nearby church hall. Data were collected by the Comm Care app. A descriptive analysis of clients allowed us to identify the main portals to serostatus knowledge for young people.

**Lessons learned:** We screened 2024 clients, including 1623 (80%) aged  $\leq 35$ , 994 (49%) men and 1030 (51%) women. The number of young people at their first ever HIV test was 1256 (77%). The proportion of youths among the participants who attended screening sites were 831 (97%) in the Schools, 212 (78%) at the bus station, 159 (65%) at the exit of mass from the Church Catholic, 421 (64%) at the market square. We also distributed over 20000 condoms and laminated HIV Educational Info Cards. These cards also indicated local HIV services available.

Integrating HIV testing into an action package for young people and with young people is feasible and effective in rural areas. Using Information and Communication Technology (ICT) for electronic data collection during mass testing is feasible and fast. Schools are the easiest sites to reach young people. Testing is also feasible in the church or religious setting for the young faithful but condom distribution was not allowed by the Catholic church leaders.

**Next steps:** Screening in churches can contribute to improve HIV testing amongst young people and should be encouraged. However, discussions related to use of condoms remain an issue in the Catholic church.

## **WEPEC194**

### **Family Based/Index Case Finding Approach - The Game Changer for Increasing HIV Testing Uptake by Adolescents and Young People**

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**Issues:** The "All in" to end adolescent AIDS initiative was launched by UNICEF and its partners in 2015 to increase the momentum of HIV response for adolescents globally including HIV testing. Nigeria was one of 25 countries chosen. In Nigeria adolescent HIV testing uptake has been a herculean task. Government and other organizations have stepped up HIV testing outreaches but these have yielded little results. This has heightened the need to explore targeted innovative approaches for testing adolescents.. This abstracts presents an initiative in Nigeria to increase adolescent HIV testing uptake using the family based /index case finding approaches.

**Descriptions:** This initiative involves; Identifying and enrolling adults living with HIV who have children/wards into the program via HIV treatment sites and support groups; providing HIV testing to all adolescents and young persons (AYPs) identified using family based/index case finding approach; providing access to HIV treatment, care and support services to all newly identified as HIV positive; obtaining comprehensive documentation and profiling the vulnerabilities of both infected and HIV negative adolescents; establishing and strengthening adolescent support groups.

**Lessons learned:** The initiative is effective in mobilizing adult index cases for iprograms targeted at AYPs. Within six months a total of 8519 index cases (4250 males and 4269 females) in 20 LGAs were enrolled in the program; Effective for increasing adolescent HIV testing uptake and linkage to treatment and support services. HIV testing were provided within six months of the project for a total of 10,027 AYPs (4897 males and 5130 females) for AYPs in 20 LGAs. All HIV positive adolescents were promptly referred and followed up for treatment, care and support services. Effective strategy for combining HTS and AYP profiling and vulnerability information gathering. Promotes parents and children HIV disclosure, which is usually a big challenge in most families.

**Next steps:** We recommend the family based/index case finding approach to all stake holders as an effective strategy for increasing HIV testing uptake by AYPs.. The result obtained shows that the approach is effective in high prevalence settings like Nigeria and other high prevalence countries, where HIV testing has been low and a large proportion of the population remains undiagnosed. The approach also facilitates prompt linkage to care, treatment and support services especially for AYPs.

## **WEPEC195**

### **Dépistage VIH et Approche "Index Testing": Expérience de l'ONG Association de Soutien à l'Autopromotion Sanitaire Urbaine (ASAPSU) Yamoussoukro, Côte d'Ivoire**

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**Description du probleme:** Depuis 2017, la Cote d'ivoire a adopté l'approche du « tester et traiter tous ». Cette stratégie s'inscrit dans le cadre de l'atteinte des objectifs d'élimination du VIH d'ici 2030 et de la réalisation des objectifs 90 90 90 de l'ONUSIDA. Au niveau opérationnel plusieurs actions ont été développées par certains partenaires de mise en œuvre locales avec l'appui de partenaires au développement.

De Mars 2018 à Septembre 2018, ASAPSU a mis en œuvre l'approche dite 'Index testing ' à l'endroit des Clients Sexuels Réguliers des Travailleurs de Sexe Féminin (TSF). Le dépistage s'est fait à partir d'une personne index (la TSF VIH positive)

**Activités et resultats:** Les activités réalisées étaient essentiellement : La sensibilisation (Entretiens individuels) de ces Clients Sexuels, le dépistage, la mise en lien avec les services de traitement et de soins et de prévention du centre médical de l'ONG, la prescription des ARV conformément aux directives nationales, la prise en charge médicale des comorbidités, l'offre des services de prévention, l'appui psychologique. En outre ils ont bénéficié d'un appui financier par la paie des frais de transports pour se rendre au centre médical.

Sur la période des 6 mois, 112 Clients Sexuels Réguliers de TSF positives au VIH ont été sensibilisés et dépistés au VIH. Sur les 112 dépistés, 49 ont été déclarés positifs au VIH. L'âge des cas positifs au VIH variait entre 20 et 60 ans. Les 49 dépistés positifs au VIH ont été tous mis sous ARV et suivi.

**Lecons apprises:** Les Clients Sexuels Réguliers des TSF positives sont potentiellement à risque.

L'index testing apparait comme une opportunité pour dépister ces Clients Sexuels Réguliers, mettre sous traitement les cas VIH positifs et ainsi prévenir l'évolution fatale de la maladie ou de nouvelle transmission du virus.

La sensibilisation, la promotion du dépistage, le soutien et le suivi renforcé des cas positifs par l'équipe médicale et communautaire ont été des facteurs très déterminants dans la motivation de l'acceptation du dépistage et la mise sous ARV.

**Etapes futures:** L'expérience est à partager tous les acteurs engagés dans la lutte contre le VIH/sida et à étendre en ciblant les autres populations hautement vulnérables.

Nécessité d'une forte implication des acteurs communautaires et du district sanitaire de Yamoussoukro.

**Mots clés:** Travailleuses de Sexe Féminin, Index Testing, Clients Sexuels Réguliers, VIH positive, Côte d'Ivoire

## WEPEC196

### Outcome of HIV Testing among Family Members of Index Cases in Côte d'Ivoire

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**Background:** In Côte d'Ivoire, HIV testing activities supported by PEPFAR between June 2015 and December 2016, reported HIV positivity rates of 0.7% among those < 15 years and 3.0% among those over 15. A 2018 population-based HIV survey in Côte d'Ivoire suggests that 37% of adults (15-64) are aware their positive HIV status, highlighting substantial gaps towards HIV epidemic control. Targeting HIV testing of the partners, children and other family members of known HIV index cases may increase case finding.

**Methods:** The Family Approach to Counseling and Testing (FACT) program consists in enumerating the family members of patients living with HIV (index cases), offering them HIV testing, and, as needed, HIV treatment. We reviewed outcomes of the FACT program between June 2015 and December 2016, across 36 sites in Abidjan. We evaluated the FACT program outcomes in terms of the number of family members referred, testing uptake (i.e. % of those referred who came to the facility for testing), and number of positives linked to care and initiated on treatment.

**Results:** 1,762 HIV positive index cases enumerated a total of 644 partners, 2301 children and 508 "other" family members. Testing uptake was 75% for partners, 89% for children, and 78% for "others". Of the partners who were tested, HIV positivity was 21%; HIV positivity was 5% for children and 11% for "others". Only 30% of index cases were female, yet 90% of partners who tested positive were referred by a female index, suggesting that females were far more likely than males to refer a positive partner.

**Conclusions and Recommendations:** The FACT program is a highly successful approach to case finding in Côte d'Ivoire when compared to non-index based testing results. Particularly, offering HIV testing to male partners of positive female index cases can be key to identifying previously undiagnosed males. We observed a high rate of HIV testing uptake, likely owing to the family-focused approach, where trained HIV counselors assist an entire family in the management of HIV infection, and offer benefits to the family as a whole.



## **WEPEC197**

### **Creating Demand for HTS among School Aged Children through School Debates**

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**Issues:** HIV testing is a critical step in epidemic control. Testing children, especially in the 5-14 years' age group, is difficult because of a drop in health service engagement between infancy and adulthood.

**Description:** EGPAF developed a strategy with the Ministries of Health (MOH) and Education (MOE) to conduct school-aged children mobilization campaigns in selected primary schools to encourage and link children for HIV testing. Four schools were identified with MOE and campaigns were launched in two phases; phase one in Matsanjeni and Lulakeni (June-August 2017), phase two in New-Heaven and Ntjanini primary schools (February-April 2018). Prior to each campaign, teachers and pupils selected a topic (e.g. factors inhibiting access to HIV testing) and conducted in-depth research on that topic. On campaign day, groups presented their topics to the school; discussions ensued moderated by local nurses. Children who showed interest in HIV testing services (HTS) at the campaigns were referred to nearby facilities for testing using referral forms. Consent forms were sent home for caregivers sign-off among children under 12 years in case the caregiver is not able to accompany the child to the facility.

**Lessons learned:** For phase 1, during a 3-month period (January-March 2017) pre-intervention, 371 children (5-14 years) were tested for HIV in two nearby facilities, while during the 3-month intervention period (June-August 2017), 564 children were tested in the two same facilities. For phase 2, during a 3-month period (October-December 2017) pre-intervention, 477 children were tested, while during the 3-month intervention period (February-April 2018), 839 children were tested. Combining phase 1 and phase 2 data, the intervention improved HTS uptake from 848 children before to 1,403 children during the 3-month intervention period. By referral form count, 1,401 children were referred for HIV testing, 1,403 (including peers recruited by those referred) reached the facilities and were tested for HIV. Three (0.2%) children tested HIV-positive and started treatment

**Next steps:** Engaging children at schools is an effective strategy for demand creation and enhances linkage to testing. However, positivity yield was quite low in school age children in this region. There may be greater justification for this approach in older school children or in higher prevalence settings.

## WEPEC198

### Regional Differences in Effects of Gender and Age on Uptake of HIV Testing in Sub-Saharan Africa: A Meta-analysis Using Household Survey Data

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**Background:** In sub-Saharan Africa, reports have shown great strides towards country-level achievement of the UNAIDS 90-90-90 global targets. We examined gender and age disparity in uptake of HIV testing across regions of sub-Saharan Africa.

**Methods:** We conducted meta-analysis on aggregate data from cross-sectional Demographic and Health Surveys (DHS) reports conducted between 2000 and 2018 among individuals of reproductive age (15-49 years) in four African regions; western Africa (13 countries); Southern Africa - 9; Eastern Africa - 6; and Central Africa - 4 countries. We extracted proportions of HIV testing with population estimates stratified by gender, age and region. By region, gender and age stratum, we then computed the number of persons who tested for HIV. We combined these data using meta-analysis with random effects model to estimate weighted prevalence and their 95% confidence intervals stratified by region, gender and age groups. Analysis was done using STATA version 14.

**Results:** Data from 619,238 individuals (Western Africa 250,515(40.6%); Southern Africa 154,130(24.9%); Eastern Africa 149,669(23.4%); Central Africa 64,924(10.5%)), majority women (69.5%) and 39.9% young adults (15-24 years) were analyzed. Overall, greater proportion of females 68.3%(55.3% -81.3%) in Eastern Africa tested for HIV compared to other regions (South 66.3%(51.5%-81.2%); Central 38.2%(14.6%-61.7%) and Western 32.9%(26.2%-39.7%). Similar trends were observed among males with highest proportions in Eastern Africa 58.1%(45.2%-71.1%) and lowest in Western Africa 18.2%(15.2%-21.2%).

Regional differences with gender and age disparities were noted among males (15-49 years) who were less likely to test for HIV compared to females (15-49) (Risk Ratio (RR)=0.7:95% CI:0.66-0.75) with the lowest RR observed in Western region RR=0.57:95% CI:0.48-0.67 and highest in Eastern Africa 0.85:95% CI:0.78-0.93. The same was observed among young adults who were sexually active, males compared to females were less likely to test for HIV (RR=0.60:95% CI:0.53-0.69); lowest RR observed in Western region RR=0.49:95% CI:0.37-0.66 and highest in Eastern Africa 0.82:95% CI:0.60-1.12.

**Conclusions and Recommendations:** We observed regional differences in uptake of HIV testing by gender and age. HIV testing remains low among young men especially in western region. Region specific interventions that target different age groups and genders are needed to increase uptake of HIV testing in sub-Saharan Africa.

## **WEPEC199**

### **Acceptabilité de L'autotest VIH chez les Étudiants de l'Université de Kinshasa**

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**Introduction:** Pour atteindre l'objectif ambitieux de la stratégie d'accélération de la riposte 90-90-90 permettant de mettre fin à l'épidémie du sida d'ici 2030, L'OMS met l'accent sur l'autotest VIH pour augmenter le dépistage, spécialement chez les populations clés et les jeunes. Les jeunes sont particulièrement vulnérables pour être atteints et transmettre le VIH. Plus de 50% des nouvelles infections dans le monde sont retrouvées chez les hommes de 15 à 24 ans. Dans l'optique d'une implémentation de l'autotest VIH dans toute la RD Congo, l'objectif de la présente étude était d'évaluer l'acceptabilité de l'autotest VIH chez les étudiants de l'Université de Kinshasa.

**Methodes:** Une étude transversale à visée analytique a été menée sur les étudiants de l'Université de Kinshasa d'avril en juin 2017. L'échantillonnage était probabiliste à plusieurs degrés. L'analyse de régression logistique multiple a été utilisée pour identifier les facteurs associés à l'acceptabilité de l'autotest VIH chez les étudiants de l'université de Kinshasa.

**Resultats:** Sur un total de 422 étudiants, la majorité des étudiants (54,3%) était âgé de 20 à 24 ans. Il y avait plus d'hommes (53,6%) que des femmes. Le tiers des étudiants (34,8 %) étaient sexuellement actifs, 219 (51,9%) étudiants rapportaient avoir un partenaire sexuel et 21 (5%) avaient deux ou plusieurs partenaires.

Vingt-huit pourcent des étudiants ont utilisé le préservatif lors du dernier rapport sexuel. Quarante-six pourcent se sont testés au VIH. Les raisons de dépistages étaient le plus souvent le souci de connaître sa sérologie. L'acceptabilité de l'autotest VIH était élevée (67,1%). Deux cent soixante étudiants (61,6%) étaient d'accord d'apporter ce résultat à l'hôpital pour confirmation. La volonté d'acheter le test (OR:8,29 CI à 95%: 4,46-15,42,  $p < 0,001$ ) et la volonté de réaliser le test avec le partenaire (OR :5,42 CI à 95% :2,96-9,91,  $p < 0,001$ ) étaient les facteurs associés à l'acceptabilité de l'autotest VIH.

**Conclusions et Recommandations:** L'acceptabilité de l'autotest était élevée. La volonté d'acheter le test et la volonté de réaliser le test avec son partenaire étaient des facteurs associés à l'acceptabilité de l'autotest. L'acceptabilité élevée de l'autotest en milieu universitaire de la RD Congo suggère une implémentation de la stratégie.

## **WEPEC200**

### **Contribution de l'Organisation CILSIDA à l'Atteinte des 90 90 90 de l'ONUSIDA à Travers le Dépistage de Proximité au Togo**

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**Introduction:** La survie des personnes vivant avec le VIH sera améliorée par l'accélération de la mise sous TARV sans condition. Ainsi le Togo s'est engagé pour que 2 732 504 personnes soient dépistées au VIH dans la population générale d'ici 2020 (PSN 2016-2020). L'organisation CILSIDA a initié cette action de janvier 2017 à mai 2018 dans la zone portuaire pour contribuer à l'atteinte de cet objectif.

**Description:** L'approche est basée sur le dépistage de proximité des coins et recoins dans les 9 localités cibles du projet à la suite programmatique des sensibilisations de proximité préalablement réalisées par 45 éducateurs communautaires et 9 superviseurs.

**Resultats:** 288 établissements scolaires ; 199 ateliers d'apprentissage ; 59 églises ; 51 mosquées ; 12 marchés ; 41 stations de taxi motos ; 11104 ménages ; 38 centres de regroupements ; 15629 counseling ; 769 causeries éducatives ; 70554 personnes touchées ; 142452 préservatifs distribués ; [1-4] ans : 192 dépistées dont 2 cas positifs ; [5-9] ans : 346 dépistées dont 2 cas positifs ; [10-14] ans : 752 dépistées dont 1 cas positif ; [15-19] ans : 1665 dépistées dont 3 cas positifs ; [20-24] ans : 1722 dépistées dont 10 cas positifs ; [25-29] ans : 2930 dépistées dont 55 cas positifs ; [35-49] ans : 1962 dépistées dont 49 cas positifs ; [≥50] ans : 836 dépistées dont 27 cas positifs ; 99 féminins positives contre 50 masculins positifs.

**Lecons apprises:** Ce projet a suscité en les populations un engouement pour le dépistage VIH ce qui leur a permis de connaître leur statut sérologique. La demande des populations pour le dépistage VIH auprès de CILSIDA a augmenté.

**Prochaines etapes:** Faire le suivi des cas positifs et leur assurer le dépistage de la charge virale.

## WEPEC201

### Facteurs Associés à la Durée d'Attente avant Utilisation de l'Autotest à VIH Reçu par des Personnes à Risque d'Infection à VIH au Sénégal

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**Contexte:** Une stratégie proposée pour atteindre les objectifs du premier 90 est l'auto-dépistage VIH particulièrement chez les populations clés. Au Sénégal, depuis 2017, Enda santé en collaboration avec l'université John Hopkins de Baltimore mettent en œuvre un projet de recherche sur l'auto-dépistage au VIH chez les populations les plus à risque. L'objectif de cette étude est d'évaluer l'acceptabilité de l'auto-dépistage du VIH chez des personnes à risque d'infection VIH élevé au Sénégal.

**Méthode:** Deux types d'approches ont été utilisés pour la distribution des kits d'auto-dépistage du VIH. L'approche basé sur le lieu était orientée vers la population la plus à risque et difficile à atteindre.

L'approche basée sur le réseau qui consistait à fournir à chaque individu un kit d'autotest salivaire **Oraquick** pour lui-même, et deux kits à distribuer à quelqu'un de son réseau social (ses partenaires sexuels, ou amis). Un questionnaire post-test avait été administré aux individus ayant reçu un kit d'auto-dépistage et qui avaient accepté de répondre au téléphone deux semaines après avoir reçu le kit, afin d'évaluer l'acceptabilité de l'utilisation de l'autotest.

**Résultats:** Sur le total des 817 personnes répondant au questionnaire post-test, 55,6% sont de sexe féminin, 41,2% sont âgés de 30 ans et plus. 93% affirment avoir utilisé l'autotest reçu, et parmi eux, 45% l'ont fait à la maison et 55% l'ont fait sur site. 64% l'ont utilisé immédiatement, alors que 36% avaient attendu 2 jours ou plus. 47% étaient des primo-testant au VIH. 89% sont prêts à recommander l'autotest à d'autres personnes proches. 73% pensent qu'il y a une demande élevé d'autotest dans leurs communautés. Il a été noté une association statistiquement significative ( $p < 0,05$ ) entre la durée d'attente avant l'utilisation de l'autotest après l'avoir reçu et les facteurs suivants : déjà eu des rapports sexuels en échange avec de l'argent ou un bien ; partie significative des revenus pendant les 6 derniers mois provient du travail du sexe, déjà eu des rapports sexuels anaux réceptifs, le lieu de réception de l'autotest. Il n'y a pas eu d'association entre la durée d'attente et le fait d'être primo-testant au VIH ( $p=0,92$ ).

**Conclusion:** Ces résultats ont permis de définir des stratégies de distribution des autotests auprès des populations les plus touchées par le VIH au Sénégal dans le cadre d'un nouveau projet mise en œuvre par Solthis en collaboration avec Enda santé.

## **WEPEC202**

### **Improvement of Index-based Contact Testing at USAID Funded Sites in Haiti in the Context of HIV Disclosure Fear and Stigma**

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**Issues:** On December 2016 World Health Organization (WHO) published a policy brief that recommends the delivery of a comprehensive package of testing and care to people living with HIV and their partners. However, in Haiti there is no law that requires HIV disclosure from HIV positive patients to their sexual partners nor does a law that supports assisted partners notification. Nevertheless, in December 2018, our National AIDS Control Program adapted from CDC and WHO the index-based contacts testing (ICT) guidelines according to our context and scarce settings. We will present the results and challenges reported from the implementation of ICT at USAID funded sites.

**Descriptions:** Haiti is committed to offer HTS to 95% of the people living with HIV and index-based contacts testing (ICT) strategy. Contacts include primarily sexual partners and biological children of people living with HIV (index). EQUIP substantially contributed with the National AIDS Control Program of Haiti Ministry of Health to conduct onsite and offsite ICT trainings sessions for providers and community health workers followed by technical assistance visits. One of the major barriers to ICT performance is that in Haiti providers cannot notify sexual partners and biological children of people living with HIV about their exposure to HIV. Due to stigma and concerns about confidentiality breach and fear of intimate partners violence 90% of index patients who participated in ICT have chosen to bring or refer their contacts rather than allowing providers to reach out to their contacts. We had to customize ICT offer to index patients by strengthening trust and respect of confidentiality to reassure them of the benefits of ICT in their relationships despite the stigma.

**Lessons learned:** From October-December 2018 there were 800 contacts tested from which 153 HIV positive, whereas following the customized ICT offer to index patients and the stigma reduced approach we had from January-June 2019 a total of 2739 contacts tested including 684 contacts newly tested HIV positive (ICT Yield= 25%). Hence, we need to identify ICT champions and collaborate with them to influence policy and law makers to reduce stigma.

**Next steps:** Integrating HIV self-testing into ICT will help test for HIV the hard to reach contacts and those who refuse to come to health facilities. Furthermore, Haiti needs to pass laws that will support assisted partners notification and HIV disclosure from index patients to their contacts.

## WEPEC203

### Can HIV Self Testing Using an Oral Kit Replace the Traditional Blood Based Routine Follow-up Testing among Clients on Pre-exposure Prophylaxis? Findings from an Acceptability Study in Central Uganda

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**Background:** About 12% of Ugandans living with HIV are yet to be identified by 2020. Majority of new HIV infections occur in Key Populations such as sex workers, fishermen and men who have sex with men (MSM). HIV self-testing (HIVST) could be an alternative for Key Populations (KPs) taking Pre Exposure Prophylaxis (PreP) compared to conventional HIV screening methods. We assessed factors that would enhance acceptability and uptake of HIVST among clients on (PreP) in Central Uganda.

**Methods:** A mixed methods cross-sectional study was conducted among 366 KPs attending Pre-Exposure (PreP) clinics at MARPI clinic Mulago Kampala and Kasensero HC II Kyotera clinic between May and August 2018. Data were collected using an interviewer administered structured questionnaire and through in depth interviews of selected respondents. A chi square test using cross tabulations was performed to determine association between socio demographic, economic factors and propensity to uptake HIVST while logistic regression was used to determine the predictors of uptake of HIVST. Deductive thematic content analysis was performed to explore factors that promote and inhibit HIVST uptake.

**Results:** HIV self-testing acceptability was 100% (365/365). Up to 88.4% of all clients on PreP, (n=320) preferred to use oral based kits compared to conventional blood based health care provided HIV testing, (8.5% ,n=31), or blood based HIV self-testing (3%,n=11) for routine 3 monthly HIV testing while on PreP. A total of 73% (n=265) respondents were willing to pay for a kit. Of these, 85% (n=227) would pay not more than 1.4USD. Sixty-six percent (n=243) of respondents had high propensity to uptake HIVST. Predictors of uptake were clinic location (rural vs urban) (aOR = 17.63 95% CI 8.44 - 36.81, p< 0.001); KP category (female sex worker's vs others) aOR= 4.36 (95% CI: 1.63 - 11.66, p=0.003) and education level ( $\leq$  primary vs post primary) aOR=0.38 (95% CI: 0.20 - 0.73). Oral fluid based HIVST was reported to be free of pain, convenient, easy to use and time saving hence preferred over other HIV testing modalities. A multi-modal approach to distributing HIVST kits was suggested by respondents.

**Conclusions and Recommendations:** HIV self-testing using an oral fluid based testing kit can be used as an alternative to the conventional routine 3 monthly follow up HIV screening for KPs on PreP. Kits distribution to KPs can employ several models. Majority of KPs would afford kits at a cost not more than 1.4USD

## **WEPEC204**

### **Trends in HIV Rapid Testing among Pediatric and Adolescent Individuals in Uganda. Are We Testing the Right Children and Adolescents?**

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**Issues:** About 88% of all people living with HIV in Uganda know their HIV status. With an HIV prevalence of 6% in the Ugandan general population, close to 212,000 individuals living with HIV are yet to be identified. The national identification gap for children and adolescents living with HIV by 2020 corresponds to about 30,000 children below the age of 10 years and about 34,000 adolescents aged 10-19 years. We present trends in HIV testing yield among pediatric and adolescent clients during a 27 months' period (January 2017-March 2019) and suggest next steps aimed at optimizing HIV testing Services (HTS) among these age categories.

**Descriptions:** HIV rapid testing in Uganda is provided through health facility and community testing models. Both models use client initiated or provider initiated HIV counselling and testing. We reviewed HIV testing program data from the District health information system (DHIS2) for 27 months (January 2017 to 31<sup>st</sup> March 2019). We used descriptive statistics to analyze HIV positivity rates among clients aged 18 months to 19 years who received HTS services

**Lessons learned:** A total of 4,639,264 clients were tested for HIV, 938,589 (20%) were aged 18 months to 9 years and 3,700,675 (80%) were aged 10 to 19 years. The average HTS yield among those aged below 10 years was 1.7% (n=15,739) higher than those aged 10-19 years (1%, n=36,015). In terms of gender among those aged below 10 years, 445,335 males were tested for HIV and 7677(1.7%) tested positive. The yield was slightly lower among females of the same age category, with 8062 testing positive out of 493, 254. For the 10-18-years age category, 27,539 (1.3%) out of 2,094,400 females tested HIV positive. The yield was lower in males with 8,476 (0.5%) out of 1,606,275 testing positive.

**Next steps:** The testing yield for children and adolescents who received HTS in a period of 27 months was lower than the national general HTS yield of 3.3%. Owing to the low yield, there is need to screen for HIV before testing so as to increase efficiency in HIV rapid testing among these age groups especially in males aged 10 years and above. With about 64,000 pediatric and adolescent clients yet to be diagnosed, there is need to adopt targeted HIV testing focusing on case identification such as Index Partner Notification among sexually active adolescents, use of HIV self-testing for self-screening in older adolescents (15 years and above) and use of index client testing for pediatric clients.



## **WEPEC205**

### **Improving HIV Case Identification for Adolescents and Young People through Assisted Partner Notification (APN) Approach: Identification Game Changer for Uganda**

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**Issues:** Uganda rolled out Assisted Partner Notification (APN), a form of index client testing in January 2018 as a strategy to optimize identification of 12% un-diagnosed Ugandans living with HIV by 2020. By December 2018, 805 health facilities were implementing APN. We present early implementation successes and challenges in using APN to maximize yield in adolescents and young people aged 15-24 years during July-December 2018 period.

**Descriptions:** The country adopted WHO APN guidelines in 2017. Data capture and reporting tools (Health Management Information Systems HMIS) were developed together with the APN training curriculum. Initial capacity building through national and regional training was conducted in Mid-July 2017 and scaled up country wide a phased manner. We conducted 3 days' facility based trainings of health workers in APN and implementation at trained facilities started same week. APN data was collected by HMIS focal persons at implementing facilities monthly and sent to the Ministry of Health (MOH). Data was analysed monthly and quarterly to inform further decision making during the roll out process.

**Lessons learned:** A total of 19,872 index clients aged 15 to 24 years were identified during July-December 2018 period. Of these, 62% (n=12,326) were interviewed, enlisting 17,930 sexual contacts in the last 12 months. Of the enlisted sexual contacts, 84% (n=15,110,) were notified about their potential exposure to HIV and of the notified, 80% (n=12,185) were tested for HIV and from those tested, 2,623 adolescents and young people were found to be HIV positive resulting in an average yield of 22%. Of the newly identified HIV positive, 91% (n=2403) were linked to care. Up to 1,092 (7.2%) of all notified clients were already in care by the time of notification.

**Next steps:** Index client testing (APN) is a novel strategy in identifying the un-diagnosed adolescents and young people living with HIV. The last mile in reaching the un-diagnosed adolescents and young people requires contact tracing using a positive client as the index case. As nations strive to end the epidemic by 2030, targeted HIV testing (APN inclusive) should be embraced. Client loss along the cascade was observed. Next steps shall focus on curbing losses along the cascade.

## WEPEC206

### HIV Self-testing - Where Do We Stand?: A Review of HIV Self-testing Policies in 45 Countries

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**Background:** HIV self-testing (HIVST) is a WHO-recommended approach for reaching those who may not otherwise test for HIV. According to global reporting from 130 countries, 77 countries have adopted HIVST policies, but only 38 were implementing HIVST. Here we assess HIVST policies across WHO HIV Priority Countries to understand gaps and opportunities.

**Methods:** We reviewed HIVST policies from WHO's 45 HIV Priority Countries, chosen based on overall need, burden, and gaps in HIV testing, treatment, and prevention. National HIVST policies were identified using WHO's national policy repository. Data were extracted on HIVST delivery channels, targeted populations, quality assurance, and linkage.

**Results:** 13 (29%) of 45 countries had national policies supporting HIVST. All were published in last three years and most were in Africa (n = 11/13, 85%). Of 11 policies from Africa, 7 were from Eastern and Southern Africa and 4 from West and Central Africa. All policies emphasized that reactive HIVST results must be confirmed with an additional test, and nearly all (n = 11/13, 85%) emphasized linkage to appropriate services after both reactive and non-reactive results. All countries specifying delivery approaches (n = 7/13, 54%) allowed for both directly assisted and unassisted HIVST, though in 2 countries assisted approaches were recommended for adolescents under 18 years. 6 countries (n = 6/13, 46%) provided information on age of consent.

Among countries mentioning HIVST distribution channels (n = 8/13, 62%), all suggested at least 1 delivery channel besides healthcare facilities, including community or workplace distribution or sale online or in pharmacies. 5 (38%) suggested secondary HIVST distribution to reach sexual partners or peers. Only 5 (38%) countries provided detailed quality assurance measures. All 5 recommended monitoring and evaluation tools, including national registers, reporting indicators, and surveys; and required that HIVST be WHO prequalified and validated in-country.

**Conclusions and Recommendations:** Though HIVST is a WHO-recommended testing strategy, fewer than one-third of WHO HIV Priority Countries have HIVST policies. Priority countries, particularly outside sub-Saharan Africa, should be supported to develop HIVST guidance, including methods for reaching underserved populations and promoting quality assurance.

## **WEPEC207**

### **Using a Co-design Approach to Increase Demand for HIV Testing Services (HTS) among Men (30-49 Years) in Uganda**

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**Issues:** In 2016, the Ministry of Health (MOH) adopted the UNAIDS 90-90-90 strategy. By 2017 awareness of HIV status was below target at 73%. Data showed that older men (30-49) were not reached with HTS. Estimated HIV prevalence among men age 30-49 was approximately 15%, exceeding the average for all men (5.8%), and total unmet need for HIV testing among men age 15+ was estimated at 176,382 (DATIM 2018). There was limited understanding of the barriers and motivators of HTS uptake among older men, making it difficult to design effective engagement strategies.

**Descriptions:** The USAID Communication for Healthy Communities (CHC) project and MOH conducted a *Participatory Action Media* workshop with older men to understand barriers and motivators to HTS uptake. This co-design approach led to the rapid design of tailored strategies to engage older men in HTS. Participants in the workshop identified important barriers to HTS uptake: low HIV risk perception, fear of test results, lack of differentiated HTS, myths about ART and fear of side effects, stigma, provider attitudes, and lack of time. These insights were used to design two demand creation campaigns targeting both service providers and older men to generate discussions among men and improve provider skills. These campaigns used interpersonal communication (IPC) peer approaches to engage targeted men and motivate and link them to HTS. IPC was supplemented with radio and television spots and posters placed in mapped hotspots to reinforce messages. These activities were complemented by differentiated HTS delivery methods to ensure services were taken closer to communities, including homes and workplaces, to be more easily accessible to older men.

**Lessons learned:** Data from CHC Audience Listening Survey (2018) found that Males 30-49yrs exposed to HIV messages were more likely to test and receive results than those who were not (OR=1.102, 95% CI (1.055 - 1.188)). The survey also found that positive attitudes towards HIV testing increased from 76.7% (June 2017) to 93.6% (Sept 2018) and males 30-49yrs who tested for HIV and received results from 92.4% (June 2017) to 98.8% (Sept 2018). District Health Information System (DHIS2-2019) showed that during the campaign period more men than women were diagnosed HIV-positive (3.6% vs 3.0%) and men had a higher linkage to care rate than women (91% vs 89%).

**Next steps:** Demand creation strategies co-designed with the audience contributed to improved HTS uptake among older men.

## **WEPEC208**

### **Closing the Gap of the First 90 of 2020 UNAIDS Targets Using Index Testing Approach in City of Kigali**

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**Background:** Despite a stabilized HIV prevalence among the general population (3%) for the last decade in Rwanda, new infections are rising among young people. Currently HIV prevalence is 1% for 15-24years old. Since 2016, Rwanda has adopted the WHO recommendations of, "Treat All", where all patients tested positive are timely initiated on ART without any condition. This contributed tremendously to almost achieving the 90-90-90 targets ahead of 2020. Of the estimated PLHIV in Rwanda, 89% know their status; of which, 92.3% receive ART, and 91% of them suppress viral load (below 1000 copies/ml) . The first 90 is the key in HIV program and it is not easy to reach it that's why we looked on strategies which can help to close this gap , so index testing approach is among the innovative strategies to used . Index testing strategy is focused on HIV testing for biological children and sexual and/or partners of an HIV infected individual who is enrolled in HIV treatment services. This descriptive study aims to show the contribution of index testing in reaching the 2020 UNAIDS targets.

**Method:** In December 2018, WE ACTX FOR HOPE CLINIC started this approach by training all ART nurses, counsellors and laboratory technicians New HIV infected clients from different entry points & Known HIV clients followed in our clinic with 18 years and above were sensitized on this strategy. Consent form was signed and family members, sexual partners were contacted by the client her/himself or by health care provider or by client together with the healthcare provider. data manager entered data in excel sheet every day and every month data were analysed .

**Finding/ results:** 207 index clients (30 registered in family members side & 177 for sexual partners notification) brought 68 family members with 5 people (7.35%) newly diagnosed HIV positive and 361 sexual partners with 40 (11.08%) people newly diagnosed HIV positive . 45 newly diagnosed HIV positive accepted the recency testing and 40 among (88.8%) them were having long term HIV infection.

**Conclusion:** Index testing is an innovative strategy to reach 2020 UNAIDS targets

## WEPEC209

### An Examination of Partner Notification Approaches for Sexual Partners and Children of HIV Index Cases in Supported Sites by Fondation Ariel Glaser in Côte d'Ivoire

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**Background:** Index testing is part of HIV testing service (HTS) strategies that may contribute to prevention of HIV transmission. Index testing provides facility-based HIV testing to index clients' sexual partner(s) and biological children aged < 15 years and enables linkage to care and treatment for those HIV-positive. Fondation Ariel Glaser offers HIV-positive index clients a choice of four approaches to index testing: Client referral where the index client refers their contacts for testing; provider referral where the healthcare provider refers the contacts for HIV testing; contract referral, a client-provider hybrid approach; and dual referral, where both the index and their partner are tested together. This study examines the four approaches to index testing at four facilities in Gboklè Nawa San-Pedro from October 2018 to March 2019 to assess the need to improve the testing of HIV partners.

**Methods:** This was a retrospective cohort study. Data for all patients newly diagnosed with HIV (index clients and their contacts seen in the four facilities during the study period, were abstracted from the individual index case file and the index testing register.

**Results:** 1,558 contacts (1,089 sexual partners & 469 children < 15) were enumerated by 1,089 newly diagnosed HIV-positive index clients. 49% of contacts enumerated (sexual partners=374 and children < 15= 387) came to the facility to be tested: 468 were reached through client referral, 2 through contract referral, 270 through provider referral, and 21 through dual referral. Among the 761 contacts who came to the facility to be tested, 38% (sexual partners=283 and children < 15= 5) were HIV-positive. Of the 468 contacts tested following client referral, 24% (110) were sexual partners of whom 73% (80) tested positive, and 76% (358) were less than 15 years of age of whom 5 tested HIV-positive. Conversely, of the 270 contacts tested following Provider referral, 91% (245) were sexual partners of whom 76% (185) tested positive, and 9% (25) were less than 15 years of age and all tested negative for HIV.

**Conclusion and Recommendations:** Index clients are generally comfortable bringing their child to a facility for HIV testing; yet prefer to have a health care provider reach out to their sexual partners about the need for an HIV test, rather than approaching the sexual partners themselves. To improve the efficiency of HIV index testing services, there is a need to enhance specific approaches.

## WEPEC210

### Assessment of an adapted HIV risk screening tool to identify undiagnosed children in Burundi

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**Background:** Identifying CLHIV is critical but difficult, especially in very low prevalence settings. Burundi is a very low HIV prevalence country with estimated ART coverage at 30% for children under 15 years old. The study objective was to assess performance of a pediatric HIV risk screening tool used to reduce unneeded testing of low risk children 1-14 years old at ambulatory consultation within the PEPFAR Burundi program. A nine-question HIV risk screening tool was developed to improve targeted testing and identify undiagnosed children with HIV.

**Methods:** A cross-sectional study of children aged 1-14 years seeking ambulatory care services was implemented at 23 health facilities in five provinces. The study population was 24,601 children with either an unknown or undocumented HIV status, accompanied by a parent or caregiver of 18 years of age or older. After caregiver consent and child assent, all eligible children and caregivers were administered the tool, and all children were referred for testing. Data was collected by healthcare providers and abstracted by study staff. Descriptive and exploratory bivariate analyses were performed in STATA 13.1.

**Results:** The study was stopped early for futility after interim data analyses found a lower positivity rate than expected. Additional resources were unavailable to reach the larger sample size. Of 16,786 children enrolled, 8,403 (50%) were female. Eighteen children (0.11%) were HIV-positive including 0.07% (9/12,607) of < 5 years and 0.22% (9/4,179) of 5-14 year olds. A higher positivity rate was found in females in the 5-14 age band compared to males (0.4%, 9/2,178 females vs 0%, 0/2,001 males). Bivariate analysis revealed associations between a positive HIV test and: one or both parents of the child deceased ( $p=0.046$ ), and recurring diarrhea or two or more episodes of diarrhea in the past three months ( $p=0.097$ ).

**Conclusions and Recommendations:** While validation of the screening tool was not possible due to limited resources in reaching the sample size, this study is the largest analysis of HIV positivity rates among children at the ambulatory entry point in Burundi. Our findings suggest the difficulties with case finding for children ages 5-14 years, and in higher prevalence provinces, paired with HIV prevention activities for girls ages 5-14 years. We recommend that Burundi's HIV program include the two questions into screening at pediatric ambulatory settings to continue further assessment. We conclude that routine HIV testing in ambulatory settings is not an effective approach for identifying CLHIV, and that the program should focus on index testing.

**Keywords:** HIV, children, screening tool, HIV testing

## WEPEC211

### **A Quality Improvement Collaborative Markedly Increased Inpatient Provider-initiated Testing and Counseling and HIV Diagnosis at 10 Hospitals in Sierra Leone**

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**Background:** Only 47% of people living with HIV in Sierra Leone know their HIV status. The National AIDS Control Program (NACP) is committed to expanding access to high-quality HIV testing services and has identified inpatient provider-initiated testing and counseling (PITC) as a priority. However, despite the inclusion of inpatient PITC in Sierra Leone's national HIV guidelines, it is rarely implemented. In response, ICAP at Columbia University and the U.S. Centers for Disease Control and Prevention (CDC) partnered with NACP to pilot the use of quality improvement (QI) methodology to enhance the coverage of inpatient PITC services at 10 health facilities (HF).

**Methods:** In October of 2017, an initial "best practices" package and new documentation tools and job aides were introduced at 10 hospitals in four of Sierra Leone's 10 districts. In December of 2017, these HF were supported to launch a QI Collaborative (QIC) to improve PITC coverage. QICs are organized multi-HF projects, in which QI teams at each HF use the same targets and indicators, develop and test contextually-appropriate interventions using QI methods and tools, and convene quarterly to share results. HF aimed to improve PITC coverage from an aggregate baseline of 4% to 95% within 10 months. Teams tracked RTK stock outs as a balancing indicator. At a baseline 5-day training, QI teams conducted root cause analyses and designed and prioritized HF-specific change ideas. Each HF team received monthly supportive supervision from ICAP and NACP and used QI methods to assess the impact of each idea. At quarterly meetings QI teams presented their progress and exchanged best practices.

**Results:** 10 HF participated throughout the QIC. The ICAP team made 183 supportive supervision visits to review implementation and document change ideas, which included health worker training, new documentation tools and job aides, adjustments to work flow and documentation processes, and improved patient engagement and demand creation activities. Within 10 months, 9/10 HF reached and sustained the 95% coverage target. The QIC led to HIV testing for 5,238 inpatients, 311 (6%) of whom were HIV-positive. 76% initiated ART during the hospital admission

**Conclusions and Recommendations:** The use of QI methods led to a marked increase in inpatient PITC at 10 hospitals in Sierra Leone, where HIV prevalence was 6% amongst those who agreed to testing. As a result, 311 people were diagnosed with HIV over a 10-month period.

## **WEPEC212**

### **Misclassification of HIV-positive Diagnoses: Implications for Nigeria's "Test and Treat" Policy**

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**Background:** In 2016, Nigeria adopted WHO's test and treat policy, resulting in the immediate initiation (Same Day ART) of treatment for all newly diagnosed HIV clients. This policy resulted in the scale up of newly diagnosed HIV clients initiated on ART at a range of health facilities providing differentiated models of care including community-based ART (CART). This study aimed to assess HIV-positive misclassification rates among newly diagnosed key and general population clients in a selection of facilities in Nigeria where "test and treat" has been implemented.

**Methods:** Between February and August 2018, whole blood samples were collected from newly diagnosed HIV-positive clients representing key populations and the general population in Lagos (4 sites) and Benue (3 sites) states. Initial HIV status was determined using the national rapid test serial algorithm (Determine -initial, Unigold- confirmatory, Stat pak- tie-breaker). For confirmatory testing, ten milliliters of whole blood was collected, processed to plasma, and tested using the GenScreen™ HIV1/2,O Antibody only ELISA test (BioRad, USA). Optical density (OD) for each sample was measured with the use of Emax microplate reader set at endpoint 450 wavelength. Based on manufacturer's algorithm, sample OD and calculated cut-off value ratio, an OD < 1.0 was interpreted as negative and >1.0, positive. Concordance between the rapid test and ELISA results was used to estimate the proportion of samples that were misclassified.

**Results:** A total of 788 confirmatory blood samples were collected from newly diagnosed HIV-positive key population (212 Lagos, 178 Benue) and general population (206 Lagos, 192 Benue) clients. Median OD was 3.75 (IQR:3.70-3.81) with a standard deviation of 0.13. There was a 100% concordance between rapid test and ELISA results and no misclassifications identified.

**Conclusions and Recommendations:** There was no misclassification of rapid test results, confirming that only HIV-positive clients have been placed on treatment. The perfect concordance from all the sites may be attributable to the maturity of Nigeria's HIV program at the selected sites, and the standardized quality management system for their community and facility-based HIV testing services. This finding is promising given potential concerns that misdiagnosed HIV-diagnosed people could be erroneously given treatment in the era of the test and treat policy and CART.



## **WEPEC213**

### **Identifying More HIV Positive Female Sex Workers (FSWs) through Bridge Index**

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**Issues:** High HIV prevalence among female sex workers (FSWs), together with high client numbers and inconsistent condom use, likely generates large numbers of new infections. According to Global Fund 2019 report, FSWs are 13 times likely to acquire HIV infection compared with general population women of same age. HIV testing services (HTS) form a critical first step in the identification and timely linkage to care and treatment to achieve viral load suppression which in turn reduces onward transmission to sexual partners. Despite the importance of HTS, access to HIV prevention services among FSW remains limited due to criminalization, stigma and discrimination. USAID/PEPFAR has funded FHI 360 (2016-2021) to implement the USAID Open Doors project (ODP) which aims to increase access to and use of comprehensive HIV prevention, care and treatment services by KPs in eight high HIV prevalence districts in Zambia. To address the issue of low access to HTS, the project developed the bridge index concept to reach more FSWs.

**Descriptions:** In FY2019, the USAID ODP modified the index testing modality for FSWs to ensure that male partners from the general population not targeted by the project are included in the index process. The concept of a "Bridge Index" involves the use of an intermediary HIV positive male client from the general population to reach the next FSW as primary target client. The index client (FSW) identifies sexual partners usually males from general population (Bride Index) who are contacted and referred for HIV testing services if found HIV positive. In turn the Bridge Index identifies other sexual partners usually FSWs with unknown HIV status who are elicited by the project to access HIV testing services.

**Lessons learned:** Use of HIV positive male clients of sex workers as the bridge index achieved 73% HIV positivity yield (1,063 FSWs tested with 780 testing HIV positive) compared to 30% achieved through routine testing of FSW. 780 that tested HIV positive through the bridge index were linked to ART treatment. In addition, all males from the general population who are not part of the project target were referred to other partners. Through bridge index more HIV positive clients have been reached, an increase in HIV positive yield and linkage to treatment.

**Next steps:** Use the findings to develop appropriate training tools for community volunteers and health care providers. Accelerate implementation of the bridge index testing in all project sites.

## **WEPEC214**

### **Social Determinants of HIV Testing in Pregnancy in a Rural Costa Rican Town: Insights from the Americas**

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**Background:** HIV testing in pregnancy is an essential component of prenatal care (PNC) aimed at reducing morbidity, mortality, and transmission of HIV infection. While comparatively low, Costa Rica's rates of HIV have increased recently, as has mortality attributable to HIV. In this analysis, we examine the social determinants associated with HIV testing in pregnancy in CR to better understand potential barriers to HIV treatment and detection.

**Methods:** 402 women in a rural town in CR participated in this in-person interview. Women responded to demographic questions, psychosocial indices (Multidimensional Health Locus of Control MHLC, Perceived Social Support PSS), and an inventory of prenatal procedures from their most recent pregnancy. We used forward conditional logistic regression to generate a parsimonious statistical multivariate model to ascertain significance of social determinants for HIV prenatal testing. The project was approved by CR and USA IRBs.

**Results:** Overall, 8.0% of women (n=32) indicated they did not receive a PNC HIV test. Demographics were not associated with receiving an HIV test, though the woman's literacy (both reading and writing) was significantly associated ( $p < .01$ ,  $p < .05$ , respectively). MHLC "Powerful Others" and "Internal" subscales did not differ significantly by HIV testing status, although MHLC "Chance" subscale was significantly stronger in women not receiving an HIV test compared with women who did (mean 5.8 v. 4.4;  $p = .001$ ). Women not receiving an HIV test reported significantly lower levels of social support from a significant other (PSS "Significant Others" subscale; mean 12.8 v. 14.1;  $p = .027$ ). After multivariate adjustment, both PSS Significant Others and MHLC Chance remained significantly associated with HIV testing (OR: 3.3, 95%CI: 1.2, 9.2; OR: 2.5, 95%CI: 1.2, 5.3, respectively).

**Conclusions:** Women with low support from significant others and with high fatalistic orientation may not have agency to make/advocate for decisions about important health issues and prenatal options. Health systems can consider this dilemma in their organization of prenatal care, in facilitating decision-making, and through supporting women prenatal self-determination. Other countries facing challenges to PNC HIV testing might assess social determinants of testing, which present substantial barriers to care even in the context of accessible/available screening.

## WEPEC215

### Practices and Barriers to Provider-initiated HIV Testing and Counseling (PITC) among Midwives, Nurses and Physicians in Côte d'Ivoire

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**Background:** Despite the implantation of Provider Initiated Testing and Counselling (PITC) in 2009, testing proposal remains lows in Cote d'Ivoire, even in recommended situations. The purpose of this study is to identify the practices and obstacles to PITC among midwives, nurses and physicians in Côte d'Ivoire.

**Methods:** A nationally representative cross-sectional survey was conducted in 2018 by telephone among three separate samples of midwives, nurses and physicians practicing in Côte d'Ivoire. The number of HIV tests proposed during consultation in the month preceding the survey was collected for each professional. Factors associated with the number of proposed tests were identified through ordinal logistic regression models. These factors were classified in three dimensions according to the conceptual framework of work performance (Motivation-Capability-Opportunity).

**Results:** A total of 298 midwives, 308 nurses and 289 physicians were interviewed. Midwives proposed the test more frequently, followed by nurses and physicians. Among midwives, a higher number of proposed test was associated with the perceptions (motivation dimension) that HIV testing do not require a specific consent compared to other diseases (aOR 4.00 [95% CI 1.37-14.29]). Among nurses, having received a HIV training (i.e. capability) and the presence of community HIV counselors (i.e. opportunity) was associated with a higher number of proposed tests (aOR 2.03 [1.33-3.12] and aOR 1.86 [1.21-2.87] respectively). For physicians, the presence of a voluntary testing center (i.e. opportunity) was associated with a higher number of proposed tests (aOR 1.69 [1.01-2.86]).

**Conclusion:** PITC practices and barriers were different across professions. Beyond improving environmental opportunities such as dedicated staff or services, strengthening the motivations and capabilities of healthcare professionals to propose testing could improve PITC coverage.

## **WEPEC216**

### **Community-led Index Case Testing: A Promising Strategy for Improving HIV Case Detection and Linkage to Treatment in Nigeria**

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**Background:** The HIV epidemic in Nigeria is concentrated in Key Populations (KP) and their partners - people who inject drugs (PWID), men who have sex with men (MSM), female sex workers (FSW) and partners of people living with HIV. Due to stigma, these groups have poor access to conventional HIV testing services (HTS) and linkage to treatment services has been a challenge. To address this gap, index case testing was introduced and delivered by the community. We described the feasibility of implementing index case testing, and ascertained HIV positivity rates among male and female sexual contacts of KP.

**Methods:** Since October 2017, Index case testing was introduced and targeted sexual contacts of KP. HTS was offered in nightclubs, drop-in-centers and community-based ART clinics otherwise known as One-Stop-Shops (OSSs) in Akwa Ibom, Cross River, Rivers and Lagos states of Nigeria. OSSs provided integrated services for HIV testing and counseling, STI treatment, clinical referrals and antiretroviral therapy (ART) to KP. All index testing was assisted by peer navigators. Both in-person and social network methods were used to mobilize contacts of KP to test for HIV. Client-level data, including demographic information and self-reported risk behavior, were collected on site by peer navigators. We calculated and described HIV positivity rates among sexual contacts of KP by sex, age and state.

**Results:** Between October 2018 and June 2019, a total of 9,317 (36% male and 64% female) sexual contacts from KP were offered index testing services. Among the 5,936 (64%) contacts [first-time testers] who received index testing; a positive HIV test was reported in 44.2% and 51.6% of the 4,568 males and 1,368 females, respectively. Over the 9-month period, the ratio of contacts that tested for HIV per index case was 0.71 (5,936/8,402), and the number of KP initiating ART increased by 72%. Both male (87.6%, 95%CI 76.2-99.0) and female (46.3%, 95%CI 20.2-72.4) contacts of index clients aged 35-39 years in Cross River had the highest HIV positivity rate compared to other age groups.

**Conclusions and Recommendations:** Our study suggest that including index case testing as part of community-led HTS for Key Populations and their sexual contacts is feasible and effective, particularly for reaching first-time testers and undiagnosed HIV clients.

## **WEPEC217**

### **Perception of People Living with HIV/AIDS [PLWHA] to Assisted Partner Notification Services for HIV in Calabar, Cross River State, Nigeria**

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**Background:** With less than 2 years to achieve the UNAIDS 90:90:90 targets, improving knowledge of HIV status remained lower in the cascade of care. Nigeria contributed the most to new infections in the West and Central Africa region in 2016 yet only 34% of Nigerians living with HIV know their status. Assisted Partner Notification and Testing was instituted as a differentiated care intervention to improve testing efficiency and better serve the needs of PLWHAs. This study aims to measure the level of awareness and client disposition to uptake of sexual network testing services(SNT) in Calabar

**Methods:** A mixed method study design was used. Purposive sampling was used to select two (2) high volume General Hospitals in Calabar where 647 randomly selected PLWHAs attending ART clinics were interviewed using semi-structured questionnaires. Two (2) Focused Group Discussions were conducted to assess awareness and acceptability of SNT. The study was carried out between December 2017 - March 2018. The quantitative data was analyzed using SPSS version 24 while NVivo software was used to analyze the qualitative data and results arranged into a family of themes

**Results:** Most of the respondents were single (61%), female (64%), aged 18-25 years (43%) with tertiary education (55%). 607 respondents (94%) were aware of SNT with health care workers as the main source of information. 89% reported that their partners were tested but only 69% had disclosed their status to their partners. Perceived barriers to SNT uptake were stigma, non-disclosure, poor audio-visual privacy for counseling, lack of trust for confidentiality and incentives to encourage return with partners for testing.

**Conclusions and Recommendations:** An elevated level of awareness of SNT was demonstrated in this population, evident of an ongoing intervention. Scaling-up assisted partner notification and other innovative testing strategies to all HIV treatment and care sites is key to closing the gap in knowledge of HIV status among young people and intensifying case finding for HIV. Infrastructural and quality of care improvements are key to overcoming perceived barriers to uptake of assisted partner notification services in resource limited settings

## WEPEC218

### Managing Cases with Human Immunodeficiency Virus Infection: Knowing the Dynamics from Voluntary Counselling and Testing Clients in Bobo-Dioulasso for Better Planning in Burkina Faso (1996-2014)

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**Background:** The Anonymous Screening and Information Centre (CADI) is the oldest screening centre of HIV from Burkina Faso. Since its opening, no analysis on the evolution of Human Immunodeficiency Virus (HIV) prevalence has been carried out. The study aimed to describe the dynamics of HIV infection when managing centres offering voluntary counselling and testing to client, such as the Screening and Counselling Centre (CADI), in Bobo Dioulasso, Burkina Faso.

**Methods:** A cross-sectional study was performed including people screened at the CADI from May 1996 to June 2014. Pearson khi2 test and Cuzick trend test were used with a 5% significance level.

**Results:** From 7.1% of the 11,451 cases analyzed, the average age of clients screened was 30 ± 10.83 year-old. There was a female predominance (sex ratio = 0.8). The 16.4% (15.7 - 17.1) of the cases from the 11,451 clients included in our study were tested HIV positive. The global prevalence rate of HIV in the centre has significantly decreased from 46.2% in 1996 to 1.5% in 2014 ( $p < 0.0001$ ). In 1999, 2001, and 2006, the peaks of the HIV prevalence rates were noted: 22.9%, 34.1%, and 22.8% respectively. CADI's customers' profile has significantly changed. Therefore, between 1996 and 2000, people with HIV symptoms were more common at the centre (42.7%). From 2001 to 2008, physician-prescribed screenings were best predominant (83.95%). From 2008 to 2014, a total of 72.7% people reported with reason for the screening a desire to know their serological status.

**Conclusions and Recommendations:** Progress achieved by people using the oldest HIV screening in Burkina Faso, is likely to reflect the progress and challenges in HIV infection control. The behaviour change could be a justification for the decline in HIV prevalence at the centre, hence the importance of sensitization campaigns. It should be noted that despite this change in behavior, the World Health Organization estimates that only 51% of HIV infected people knew their serological status in 2014. There is a need to achieve a revolution in screening services because, to recall, screening is an entry point for addressing efficient management of HIV infected people

**Keywords:** Burkina Faso, Clients, Prevalence, HIV, Screening, Case Management

## **WEPEC219**

### **Education pour un Changement de Comportement Durable en Matière de VIH/Sida dans le District Sanitaire de Yopougon-Est**

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**Questions:** En Côte d'Ivoire, la lutte contre le VIH reste inscrite au rang des priorités dans le domaine de la santé car demeure parmi les pays de l'Afrique de l'Ouest les plus touchés. Le dépistage étant l'une des stratégies retenues par le Ministère de la Santé, rencontre des difficultés dans sa demande surtout au niveau des hommes de 15 ans et plus dont seulement 41% l'ont effectué (CIPHIA, 2018). Les facteurs de risque face au VIH sont parfois liés au faible taux d'utilisation de préservatifs au cours de rapports sexuels, le multi partenariat sexuel et la précocité des rapports sexuels. Le taux d'enrôlement des hommes dans les activités de prévention et de dépistage reste assez faible malgré les efforts. Pour répondre à ce défi, l'ONG MESSI avec l'appui de IRC et sur recommandation de CDC a réalisé des activités spécifiques à l'endroit des hommes.

L'ONG MESSI présente les stratégies utilisées, les activités réalisées et les résultats obtenus chez les hommes au cours de la période allant de juin 2017 à février 2018.

**Objectifs :** Contribuer à la réduction de l'incidence des IST/VIH/sida chez les hommes âgés de 25 ans et plus dans le district sanitaire de Yopougon-Est de juin 2017 à février 2018. Plus spécifiquement, il s'agissait d'identifier les hommes malgré leur indisponibilité, les sensibiliser et leur offrir le dépistage.

**Description:** Le changement des normes, l'Index Testing et la pairs éducation nous permettent d'atteindre nos objectifs par les causeries de groupe et entretiens individuels, l'identification des partenaires sexuels des jeunes filles positives, le dépistage suivi de référence active des personnes positives

**Résultats:** 4739 hommes de 25 ans et plus touchés, 827 dépistés et 61 positifs tous intégrés dans les soins. Soit un yield de 7,37%. 104 004 préservatifs ont été distribués:

**Leçons apprises:** Les clubs de maracana, les espaces de jeux (awalé, ludo, dame, vidéo), les grins, les centres commerciaux tenus par les hommes, les night clubs, les restaurants constituent les portes d'entrées des hommes de 25 ans et plus et permettent d'atteindre aisément les objectifs.

**Prochaines étapes:** L'ONG MESSI incitera ses paires à s'approprier les critères d'identification des hommes ainsi que leurs lieux de retrouvaille pour toute activités à leur endroit

## **WEPEC220**

### **Mise en Oeuvre d'Index Testing Communautaire chez les Travailleuses de Sexe en Cote d'Ivoire**

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**Issues:** Les populations clés, dont les travailleuses de sexe (TS) contribuent à eux seuls à plus de 50% des nouvelles infections à VIH dans le monde et 40% en Afrique de l'Ouest. Le faible taux de dépistage du VIH dans la population générale (54%) en Côte d'Ivoire suggère la mise en œuvre d'interventions innovantes de dépistage chez les TS pour l'accélération de l'atteinte de l'objectif des 90/90/90 de l'ONUSIDA. L'index testing est une stratégie évidente à haut rendement et nécessite une réadaptation au contexte des TS.

**Descriptions:** Après l'élaboration des coupons, des formations ont été organisées en l'honneur des éducateurs de pairs (EP) sur la thématique de l'index testing. Par ailleurs, des séances de communication pour le changement de comportement (CCC) couplées au dépistage du VIH ont été effectuées sur les points chauds par les EP. Lors de ces activités, les TS dépistées positives reçoivent des coupons d'invitation. Celles-ci sont sensibilisées à remettre ces coupons à leurs contacts sexuels afin de les inviter à une consultation de santé gratuite dans l'une des cliniques dédiées ou à participer à une des séances de sensibilisation couplée au dépistage organisée par les EP. C'est ainsi que des contacts sexuels se sont présentés à des séances de sensibilisation et ont bénéficié des services de dépistage. Chaque fois qu'un contact sexuel est dépisté positif, des coupons lui sont aussi remis pour les autres partenaires exposés.

**Lessons learned:** Par le biais de 272 TS dépistées positives, 121 partenaires sexuels et enfants ont été recensés. Quant au service de dépistage, 111 (92%) ont accepté d'être dépistés dont 58 positifs au VIH (un rendement de 52%). En fonction du type de population exposés, 16 (13%) enfants de moins de 15 ans ont été identifiés dont 12 dépistés (75%), avec 4 positifs (33%). Les partenaires sexuels représentent 87% (n=105) des personnes recensées, 99 (94%) ont bénéficié du dépistage, dont 54 (55%) déclarés positifs. Le taux d'enrôlement dans les soins au niveau des partenaires sexuels et enfants était de 100%. Les résultats ci-dessous montrent que l'index testing est une stratégie à haut rendement et garantit l'enrôlement à succès dans les soins ARV.

**Next steps:** L'index testing réalisé par le biais des coupons d'invitation devra être mis à l'échelle dans le contexte de délivrance des services chez les populations mobiles comme les TS.

**Mots clés:** Index testing, VIH, Côte d'Ivoire, Travailleuses du sexe (TS)



## **WEPEC221**

### **Factors Affecting Voluntary Counselling and Testing (VCT) among HIV-1-Infected Adults in Senegal and Impact in Attrition: A Retrospective Cohorte Study**

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**Background:** Voluntary HIV counselling and testing (VCT) is one of the key strategies to reach the first 90 target, but utilization of this service still very low.

**Objective :** The aim of this study was to measure care to identify the associated factors of VCT as gateway to care and it's impact in outcomes in HIV-1 infected adults in Senegal

**Methods:** This was a retrospective cohort study design in Adults aged 16 years and more who initiated ART between January 2007 and December 2018. Logistic regression was used to analyze potential factors associated with VCT utilization.

**Results:** Of 34,451 study participants, 69.43 % were female. VCT uptake was the gateway to care in 32% of cases. In Bivariate analysis HIV testing other than VCT has been significantly associated with higher mortality (11,7% versus 3,3 % for VCT,  $p < 0.001$ ). In multivariate logistic regression VCT uptake was found to be significantly predicted by young age less than 24 years (HR 2.2 (95% C.I. 1.5-3.1)); being married (HR 1.5 (95% C.I. 1.1-2.2)); being in WHO stage 1 (HR 3.9 (95% C.I. 2.9-5.2) and having CD4 cells count more than 350 cells/mm<sup>3</sup> (HR 1.7 (95% C.I. 1.3-2.1)).

**Conclusions and Recommendations :** VCT utilization still low in Senegal and is mainly affected by age, disease stage and marital status. Senegalese HIV control program should target older and single people through innovative communication strategies.

**Keywords :** HIV ; Voluntary Counselling and testing ; Associated factors ; Senegal

## **WEPEC222**

### **Reaching Men in Humanitarian Settings: Experiences from Rwamwanja Settlement in Uganda**

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**Issues:** Uganda hosts over 1.2 million refugees, is the largest refugee hosting country in Africa & third largest globally. Most refugees are from South Sudan 64.4% , DRC 27.3% with smaller proportions from Burundi 3.1% Somalia 2.4% others 2.6%. UNHCR supports government to provide primary health care including HIV-related services in line with national policies and strategic plans. UNHCR and partners have been able to implement the UNAIDS investment framework as part of its protection & assistance mandate. HIV services uptake for men has been low across the country & it was also noted in Rwamwanja settlement. HIS reports for 2017 revealed that 7,217 people tested for HIV only 2,161 (29.9% were males with slight rise in 2018 to 37% 1,919 of the 5,184 tested.

Integrating Reach All Men (RAM) and same-day ART start into on facility-based HIV testing has potential to increase ART coverage, particularly among hard to reach priority populations such as men.

**Description:** Using the Reach All Men (RAM) strategy, an ongoing surge strategy through community-based approaches, testing was conducted at trading centers, market places, food distribution points, sand mines, motorcycle garages, motorcycle (boda-boda) stages in evenings, weekend & at SMC outreaches. The community-based testing was jointly conducted by RCT volunteers ,counselors. HIV-positive persons were assessed for same-day ART start by ART eligibility form & point-of-care testing for CD4 count, pregnancy & serum Cryptococcal Antigen(CRAG), symptom & sputum analysis for TB ,viral load testing for PMTCT were conducted for those pregnant identified +ve.

Within 3 months of intervention (April- June 2019), 1,242 people were tested, 46.8% (581 were men. 45 HIV-positive persons (yield of 3.6% were identified, of whom 22 (49% were men with yield of 3.8% 41 (91%) were eligible, ready and initiated on ART. RAM strategy has potential to reach, identify & initiate more men into care.

**Lessons learned:** Replication of proven HIV interventions is possible in a remote, resource-limited humanitarian setting with leadership, coordination shown by participating agencies. Although meant for development settings initiatives can be tailored to address HIV in humanitarian settings.

**Next steps:** Based on these findings, RAM strategy will be scaled up in other refugee settlements in the operation to address the low uptake of services for men. This will contribute to identifying missed HIV +ve persons which will also help in prevention efforts.

## WEPEC223

### High Levels of HIV Care Outcomes among Children, Adolescents and Young Adults under the Care of 'Community Adolescent Treatment Supporters' (CATS) in Zimbabwe

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**Background:** Africaid in partnership with the Ministry of Health and Child Care (MoHCC) in Zimbabwe implemented a comprehensive, peer-led programme, focussed on children, adolescents and young people living with HIV (CAYPLHIV) aged 0-24 years. The peers termed 'Community Adolescent Treatment Supporters' (CATS), are PLHIV aged 18-24 years, trained and mentored to support their fellow peers throughout the HIV care continuum through conduct of support groups, home visits and phone call reminders and messages. In this paper, we report the HIV care cascade outcomes (HIV testing uptake, ART uptake, retention and viral suppression) in a cohort of household contacts and sexual partners (aged < 25 years) of index PLHIV identified by CATS from October 2017 to September 2018 in 24 districts of Zimbabwe.

**Methods:** This was a cohort study involving analysis of routine programme data, extracted from the electronic databases. We used 30<sup>th</sup> April 2019 as censor date for all analysis.

**Results:** A total of 15,223 contacts and sexual partners with unknown HIV status (linked to 9,353 index PLHIV) were identified and referred for HIV testing. Of them, 12,114 (79.6%) were tested and 1,193 (9.8%) were found HIV-positive. Of the latter, 1,153 (96.6%) were initiated on ART with 99% starting on the same day of diagnosis. Of those on ART, 1,151 (99.8%) were alive on ART at 6 months whilst 2 (0.2%) died. A total of 1,044 (91%) PLHIV underwent viral load testing at 6 months or later, of whom, 1037 (99.3%) were virally suppressed (< 1000 copies/ml).

**Conclusions and Recommendations:** These findings add to the global evidence demonstrating the effectiveness of peer-led interventions in CAYPLHIV and justify the decision of the MoHCC in Zimbabwe to scale-up the model nationally. Future research should aim to understand the reasons for the gaps in HIV testing and viral load testing using qualitative research.

## WEPEC224

### Which HIV Testing Models Are the Most Effective in Identifying HIV-positive Female Sex Workers for Treatment Initiation in Ghana?

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**Background:** Female sex workers (FSWs) are disproportionately affected by HIV (7%), compared to females in the general population (2.8%), in Ghana. Achieving the UNAIDS 90-90-90 targets requires effectively diagnosing HIV-positive FSWs through targeted HIV testing services (HTS) to effectively reach both Seaters (home or brothel based) and Roamers (street based). The USAID Strengthening the Care Continuum Project implemented various strategies to identify HIV-positive FSWs and link them to care. We conducted an assessment of the effectiveness of the testing strategies.

**Methods:** The project conducted descriptive and bi-variate analysis using program data from a retrospective cross-sectional study. Eight testing strategies were implemented: targeted door-to-door, daytime hotspots testing, moonlight testing at hotspots, events/parties, facility-based, social network testing, Drop-In-Centers (DIC), and Helpline counselling (HLC) using hotline to refer callers for HTS. We extracted individual-level data from service records from a random sample of those tested based on probability proportion to the size of the number of FSWs tested within each strategy. The outcome variable was HIV positivity rate

**Results:** A total of 9657 FSWs were tested of which 1939 FSWs were randomly sampled. Type of FSWs tested differed significantly by testing strategy --while DIC (100%), facility-based (100%), daytime (91%), moonlight (95%), and HLC (93%) primarily reached roamers, door- to-door (44%), event/parties (24%) and social network (19.5%) were able to reach the seaters ( $p < 0.001$ ). A total of 162 tested positive. Those tested through HLC (27%), social network (11%) and event/parties (10%) had the highest HIV positivity rate compared to facility-based (4%), door-to-door (5%), DIC (6%), and moonlight (6%) ( $p < 0.001$ ). Seaters were more likely test positive compared to roamers (12% vs. 8%;  $p < 0.05$ ). Overall, 158 out of 162 (97.5%) who tested positive were linked to treatment on the same day or within two weeks. There were no statistically significant differences in linkage by testing strategy.

**Conclusions and Recommendations:** This study highlights effective strategies to reach and test different types of FSW and these strategies are complementary. Data suggests that programs allocate more resources to strategies (HTS via HLC, via social network and at event/parties) that identify the highest percentages of HIV positive persons.

## **THPEC091**

### **Strategies to Reach Out to Street Children**

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**Background:** Over the past years, efforts have been made to increase HIV case finding, but children remain under-served. In an effort to increase HIV case finding among children, the Centre for Infectious Disease Research in Zambia (CIDRZ), partnered with the Ministry of Youth, Sport and Child Development, Child Protection Unit, and Foot Print Foundation Zambia (FFZ), to reach out to street children. We describe here, the strategies used to reach out to street children in Lusaka district in Zambia.

**Methods:** Consultative meetings were held to discuss strategies to reach out to street children. Site assessments were done in hot-spots/zones in which the street children are found. Sensitizations on HIV testing, sexual and reproductive health issues, adherence (for those on antiretroviral therapy (ART)) and prevention messages were done. We conducted site assessments to the drop-in centers/homes in which these children are attached. A consent form was developed and approved by the Ministry for use and was administered to the leaders of the street children to give approval for testing the street kids, in the presence of the ministry staff. 30 sensitisation meetings were held in the different hot-spots and centers. A screening tool to identify children at high risk of HIV infection/or determine eligibility for HIV testing was administered in order to maximize on HIV case finding. The testing event occurred in the drop-in centers and zones in which street children stay and operate.

**Results:** Meetings with relevant stakeholders occurred. Site assessments and sensitization meetings were done in the drop in centers and zones. 1200 street children were sensitized. Of these, 924 street children were screened using the screening tool, to determine eligibility for HIV testing. Out of the 924 screened (630 males and 294 females), we tested 315 (201 males and 114 females), out of which 13 (4.1%) tested positive (10 new positives and 3 known positives already on treatment). Of the 10 new positives, 7 were linked into care and treatment. 3 are still being followed up by our trained counselors.

**Conclusions and Recommendations:** This community based intervention of testing street children provides an opportunity for them to access HIV testing, care and treatment and can yield more results in a short period of time. Positivity yield was high as compared to the yield we get in our routine paediatric and adolescent HIV testing.

## **THPEC092**

### **Quality vs Quantity - A National Assessment of HIV Testing Services in South Africa Focus on: Quality Control (QC) 2019**

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An assessment of HIV Testing Services (HTS) was carried out in South African provinces of Mpumalanga, Limpopo, Free State, Kwa Zulu Natal & North West & analysed quality of HTS provision at 47 sites supported by Principal Recipients of the Global Fund to Fight AIDS, TB & Malaria. This section of the assessment sought to establish if the Sub Recipient conducts quality control testing on site, whether such testing is conducted with the frequency recommended by the National Guidelines, recorded correctly, invalid results notes and ensuring that mobile sites adhere to the same standards. In several cases within this assessment sites did not conduct their own quality control testing as they would access test kits from a local clinic or hospital or their main organisational offices where quality control testing had already been done on the stock.

**Method:** The assessment tool used existing tools & was guided by the National Guidelines on HTS 2016 & comprised of 56 main questions divided into eight sections, one of which was the assessment of training & certification. Sites were selected based on location & module focus. Sites were given advance notice of the assessment & provided with a condensed version of the tool. The consultant focused on the existing testers at the site, with priority being given to lay counsellors conducting HIV testing & in some instances registered nurses who were on site & to a large extent provided oversight & monitoring support.

**Results:** Quality control processes were carried out at the vast majority of sites, with the exception of a few sites who obtained their test kits from public health facility partners or a centralized office which conducted the quality controls themselves. 2 sites conducted quality control but did not keep or kept inadequate records of this and 5 sites kept incorrect records of this. In all prisons, sub recipient staff who provided testing and screening services received comprehensive support from DCS nursing staff.

**Recommendations:** Efforts must be taken to ensure that testers and supervisors know and understand the importance of quality control as it applies to the materials used and the actual process of testing. Quality control for HTS should be an essential part of training and clinical supervision.

## THPEC093

### Knowing the Profile of Clients from the Screening and Information Centre (CADI) for Better Planning and Case Management in Bobo-Dioulasso, Burkina Faso

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**Background:** Counselling associated with screening is the entry point into the management for HIV-infected people. The purpose of the present study was to compare the profile of clients from the Screening and Information Centre (CADI) with those from the general population.

**Methods:** A cross-sectional study including all complete medical records of CADI clients from 1996 to 2006 was conducted. The following information were collected: age, sex, education level, marital status, reasons for screening, desire to share one's HIV status. The data were analyzed using stata13 software. Pearson khi2 Test was used to compare qualitative variables while Student Test was used to compare averages. The 0.05 significance level was applied.

**Results:** A sample of 752 observations was analyzed. In 1996, the average age of CADI clients was (29.95 years [29.79-31.26]) higher than the average age of the general population (21.7 years;  $p < 0.0001$ ). The proportion of women tested at CADI was similar to the proportion of the general population ( $p = 0.980$ ). The proportion of educated clients (73.03%) was higher than the general population (76.3%;  $p < 0.0001$ ), with the same applying for people living in couple (49.15%;  $p < 0.0001$ ) and workers (58.65%;  $p < 0.0001$ ). In 2006, the average age of people tested at CADI (30.62 years) was higher than the average age of the general population (21.7 years;  $p < 0.0001$ ). The proportion of women attending CADI (61.7%) was significantly higher than in the general population (51.7%;  $p < 0.0001$ ). The proportion of educated clients (75.56%) was also higher than the general population (26.1%;  $p < 0.0001$ ). The proportion of CADI clients living in couple was higher (58.93%) although it was low in the general population (0.6%;  $p < 0.0001$ ).

**Conclusion and recommendations:** The epidemiological profile of the centre's clients differs from that of the general population, i.e., one part of the population with access to screening facilities does not adhere to screening. Reasons for low self-screening must be identified in order to give more value to actions aiming to control HIV infection. It is fundamental to completely re-design prevention strategies by focusing actions on targeted population (the most vulnerable and the least supportive of screening)

**Keywords:** Bobo-Dioulasso, Case management, HIV, Profile, Screening

## THPEC094

### **Increasing Uptake of HIV Testing Service by AYP Volunteers amongst their Peers; A Community-based, Gender Sensitive Intervention in Kaduna, Nigeria**

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**Background:** The 2018 National AIDS Indicator and Impact Assessment Survey (NAIS) showed that Nigeria has high burden of HIV with an estimated 1.9 million people living with HIV. The country also has the third largest population of youths in the world. AIDS has been identified as one of the top 5 leading causes of death amongst adolescents. The National Adolescents and Young Persons (AYP) Strategy for HIV (2016-2020) highlights that only: 22% of the AYPs had comprehensive knowledge of HIV; 7% of 15-19 year-old and 15.2% of 20-24 year-old had ever tested and received their HIV test results in 2018. In 2016, the state HIV data showed that less than 10% of AYPs in the state had ever tested for HIV and only about 1% of those on treatment were AYPs. Low risk perception, inadequate access and uptake of HIV testing has been linked to rise in incidence and AIDS related death amongst AYPs.

**Methodology:** UNICEF supported an intensified gender sensitive AYP centered HIV intervention in 7 of the 23 LGAs in Kaduna State, aimed at increasing access to HIV prevention, treatment, care and services to accelerate the attainment of 90:90:90 target amongst AYPs by 2020. The intervention promoted inclusion, targeted at AYPs. 468 AYP volunteers between the ages of 14 and 24 were engaged, (3 males and 3 females) in 78 wards. Their capacity was built to raise awareness and create demand for HTS using IPC and provided mobile HIV testing services to an estimated 922,000 AYPs.

**Result:** Between August 2017 and June 2019, the 468 volunteers reached 710,209 AYPs (77% of the target; 52% males and 48% females) in the 7 intervention LGAs with comprehensive HIV prevention messages. Sixty four percent (64%) were 10-19-year-old (51% males and 49% females) while 36% were 20-24-year-old (51% males; 49% females).

HIV Testing coverage among AYPs was increased to 24% in 2019 from about 10% 2016 baseline (218,489 AYPs counseled, tested and told their HIV test results). Fifty-Nine (59%) of those tested were adolescents (47% Females and 53% Males) while 41% were young persons (48% Females and 52% Males). All those who tested HIV positive were placed on treatment

**Conclusion:** The number of AYP with comprehensive HIV knowledge increased from 22% to 77% and those who knew their HIV status was doubled over a period of 23 months. Gender sensitive, community-based adolescent focused HIV prevention interventions at scale will accelerate the attainment of the global 90:90:90 target by 2020



## THPEC095

### **Sex-specific Outcomes among Clients Offered Voluntary Assisted Partner Notification (VAPN) in EGPAF-supported Districts within the Southern Region of Malawi**

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**Background:** Voluntary assisted partner notification (VAPN), wherein sexual contacts of HIV-positive clients are traced and offered counseling and testing, has been shown to be effective in identifying PLHIV. This study describes sex-specific outcomes of VAPN in the southern part of Malawi, which has the highest HIV burden in the country with a prevalence of about 16%.

**Methods:** VAPN was implemented in 27 health facilities in Zomba and Blantyre districts between May 2018 and April 2019. Newly diagnosed HIV-positive clients aged 18 years or above, as well as those already on ART, were enrolled as index clients and offered the following options: contract referral, provider referral, dual referral (provider sits with the index client and his/her partner(s) to provide support as the client discloses his/her HIV status to the partner and then offers testing) or family referral slip. Outcome measures included proportions of contacts identified, returning for testing, testing HIV positive and being linked to ART. We analyzed differences by sex using unweighted proportions.

**Results:** Of the 7,874 index clients that were offered VAPN, 6,668 (85%) consented to participation and identified 13,303 contacts. Overall, index clients chose contract referral for 8,489 (69%) of the contacts. The proportion of index clients who preferred FRS, dual referral and provider referral were 16%, 11% and 4% respectively. Of 4,838 (38%) of all children and adult contacts reached by the index clients or providers and offered HIV testing, 2,799 (58%) were tested, 603 of whom (22%) were HIV-positive, with 525 of these HIV-positive contacts (87%) linked to ART. The majority of index clients who were offered and accepted VAPN were women (61% and 63%, respectively), and 52% of contacts identified were female. Of the contacts tested, 51% were male and 49% were female. Among those diagnosed with HIV, the majority of contacts aged below 35 years were female, while the majority of contacts aged above 35 years were male. The proportion of male HIV-positive contacts linked to ART was 89.8%, while that of women was 84.1%.

**Conclusions and Recommendations:** VAPN was well accepted by clients within the districts where the study was implemented and resulted in a high HIV-positive yield. The majority of those offered and accepting VAPN were females, generally reflecting those accessing HIV services. VAPN was effective in identifying HIV-positive older male contacts and linking them to ART.

## **THPEC096**

### **Community-based HIV Self-testing as an Approach to Reaching the "First 90" Target of UNAIDS Fast-track Strategy in Eswatini**

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**Issues:** Social, structural and systems barriers have been found to inhibit uptake of HIV testing. HIV self-testing (HIVST) has shown promising uptake by otherwise under-served priority groups, including men, young people and first time testers. However, in Eswatini, the HIVST is provided as a facility-based service instead of community-based

**Descriptions:** In 2014, the joint United Nations Programme on HIV/AIDS (UNAIDS) and partners launched the 90-90-90 targets; the aim was to diagnose 90% of all HIV-positive persons, provide antiretroviral therapy (ART) to 90% of those diagnosed, and achieve viral suppression for 90% of those treated by 2020. However, social, structural and systems barriers have been found to inhibit uptake of HIV testing. HIV self-testing (HIVST) has shown promising uptake by otherwise under-served priority groups, including men, young people and first time testers. Over the past few years, various pilot tests of the HIVST have been undertaken in different countries including Malawi, Zambia, and Zimbabwe, using varied methods of distribution. In Eswatini, HIV self-testing is facility based (available at health and HTS centers only). Applying other strategies for HIVST, especially community-based distribution, can potentially increase uptake of services in Eswatini, as evidenced in other southern African countries

**Lessons learned:** Priority groups like the youth, young men and first time testers are reluctant to access facility-based HIV testing services, especially in clinics and hospitals. Instead, they prefer mobile/ outreach service providers, who are not always available.

**Next steps:** Measures should be taken to ensure the accessibility and availability of the HIVST kits to the target populations, including at community level/ community health care worker level (like rural health motivators)

## THPEC097

### **Integrated, Task-shifted HIV Testing Services to Accelerate Test and Start Uptake in Lusaka, Zambia: Results from an Adjusted Difference-in-Difference Analysis**

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**Issues:** The Centre for Infectious Disease Research In Zambia (CIDRZ) supports Ministry of Health to deliver comprehensive HIV services in Lusaka, Zambia. To improve universal HIV testing services (HTS) access in pursuit of the first 95, we developed an integrated HTS model for busy outpatient departments (OPDs) at CIDRZ-supported facilities.

**Descriptions:** We implemented an integrated HTS model in 10 high-volume CIDRZ-supported facilities featuring:

- 1) opt-out HTS integrated into OPD care;
- 2) healthcare worker training;
- 3) dedicated HTS space and infrastructure; and
- 4) task-shifting to lay HTS counselors.

We collected data on sex, number of tests, and test date and result for all persons having a first OPD visit and receiving HTS during implementation (July—December 2017) and standard of care (SOC) periods (July—December 2016). We used an adjusted difference-in-difference analysis based on a mixed-effects linear model including a random effect at clinic level to estimate changes in OPD HTS uptake between periods. We also present trends in absolute numbers of HIV-positive patients identified and HIV positivity "yield" stratified by gender.

**Lessons learned:** We observed improved HTS uptake and an increase in the absolute number of new HIV diagnoses identified by implementing an integrated HTS in OPD strategy. HTS uptake consistently and significantly increased in OPD from year 2016 to 2017 ( $p < 0.001$ ), with a 2.89% higher absolute difference in uptake among women compared to men by intervention end. Accompanying the increase in testing uptake, we observed a significant decrease in testing yield between intervention and SOC periods (20.5% vs. 10.7%,  $p < 0.001$ ). Monthly mean number of positive tests increased from 363 to 441 from 2016 to 2017 though this was not significant ( $p=0.33$ ).

**Next steps:** Scale-up of the model is feasible. Further adaptation of the strategy is planned to address the lower testing yield observed by incorporating a HIV screening tool and HIV self-testing prior to rapid testing in the OPD.

## **THPEC098**

### **Les Activités Communes Synergiques Transfrontalières (ACSTF)**

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**Questions:** Comment contribuer à l'atteinte du résultat n°2 du Projet Prévention du VIH en Afrique Centrale (PPSAC): < < les connaissances, attitudes et pratiques en prévention des IST VIH - SIDA et en Planification Familiale sont améliorées >>?

**Description:** Les activités communes synergiques transfrontalières (ACSTF) sont un ensemble d'interventions de prévention des IST et du VIH/SIDA, visant à atteindre les populations des zones frontalières très souvent composites et d'origines diverses, essentiellement mobiles de part et d'autres des territoires voisins pour diverses raisons. Care and Health Program (CHP) était le partenaire chargé de la formation des prestataires des soins des districts de santé des zones frontalières et de l'organisation des campagnes de dépistage du VIH et de la prise en charge syndromique des cas d'IST diagnostiqués . Ces activités sont axées sur des campagnes de masse sur les IST-VIH-SIDA et offrent la possibilité aux populations cibles des zones frontalières (Camionneurs, migrants, populations riveraines, travailleuses de sexe, pêcheurs etc.) de renforcer leur prise de conscience sur les IST-VIH-SIDA, de connaître leur statut sérologique sur le VIH en vue d'une prise en charge immédiate et aussi de se faire dépister et traiter pour les IST. Cette formation avait pour but de renforcer les connaissances et les compétences des prestataires de certaines formations sanitaires des sites sur la prise en charge syndromique des infections sexuellement transmissibles, sur le counselling et le dépistage du VIH.

**Leçons apprises:** De 2012 à 2015, nous avons participé aux ACSTF au niveau de quatre nœuds transfrontaliers dont trois entre le Cameroun et le Tchad (nœuds Kousseri-Ngueli en 2 passages, Bongor-Yagoua en 2 passages et Figuil-Léré en 1 passage) ainsi que celui entre le Congo et le Cameroun (Socambo-Ouessou en 1 passage). Ces activités ont permis à 8.425 personnes de connaître leur statut sérologique, parmi lesquelles 332 personnes étaient dépistées VIH+, et à traiter 2061 cas d'IST sur les 8.542 personnes ayant consultées. Cette approche a permis à certaines population de connaître leur statut sérologique sur le VIH en vue d'une prise en charge immédiate et aussi de se faire dépister et traiter pour les IST.

**Prochaines étapes:** Il serait également important lors du deuxième passage, comme il est prévu un recyclage du personnel en prélude à la campagne, de s'assurer si le personnel précédemment formé en toujours en place.

## THPEC099

### Achieving the First 90 Target among Youths in a High HIV Prevalence Setting in Northeast Nigeria: A Call for Action

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**Background:** Young people are pivotal to the global HIV/AIDS epidemic, with regards to tracking new infections and opportunities for halting the transmission of HIV. The study assessed the uptake of HIV counselling and testing (HCT) and identified factors associated with HCT uptake among in-school and out-of-school youths, in Jalingo, Taraba State, the state with the second highest HIV prevalence in northern Nigeria.

**Methods:** The study area was Jalingo LGA, an urban LGA with ten political wards in Taraba State located in the North East zone of Nigeria. The study design was a comparative cross-sectional descriptive study. Quantitative data was collected from a total of 810 respondents (409 in-school; 401 out-of-school) aged 15-24 years using structured pre-tested interviewer-administered questionnaire. Quantitative data were analysed at univariate, bivariate and multivariate level using SPSS version 20.

**Results:** A higher proportion of out-of-school youths (89.0%) than in-school youths (83.4%) were aware of HIV testing. Although more in-school youths (83.6%) than out-of-school youths (75.1%) have knowledge of where to access HIV testing services. The proportion of in-school youths and out-of-school youths that expressed willingness to test for HIV was 79.9% and 68.6% respectively. However, only about a quarter (24.0%) of in-school youths and about a half (44.6%) of out-of-school youth were ever tested for HIV. The proportion of male and female ever tested for HIV among in-school youths was 25.8% and 21.8%; and among out-of-school youths was 46.7% and 37.8% respectively.

At logistic regression analyses, we found age ( $p < 0.001$ ), knowledge of place to test for HIV ( $p < 0.001$ ), knowledge on HIV ( $p=0.02$ ) and ethnicity were associated with ever tested for HIV among both in-school and out-of-school youths. Religion and marital status were also predictors for in-school and out-of school youths respectively.

**Conclusions and Recommendations:** The uptake of HIV testing and counselling is low among youths and is much lower among in-school youths than out-of-school youths. Overall, there are implications on Nigeria's ability to achieve the first 90 of the UNAIDS 90:90:90 target of eliminating HIV/AIDS by 2030. HIV testing should be appropriately targeted at young people with care taken to reach those in school as well as those out of school. Demand-generation activities should be designed to provide information on where young people can access HIV testing services.

## **THPEC100**

### **Scaling up Access to HIV Testing Services through Faith Worship Centers: The Experience from Health Kiosk Project in Zimbabwe**

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**Issues:** Faith-based organizations play critical roles in achieving targets of ending the HIV epidemic by 2030. Globally, religious affiliations is estimated at 84%, and 75% of Africans trust their religious leaders. Faith worship centers are often neglected as effective entry points to HIV prevention services. Well-informed, mobilized, tooled, and resourced faith leaders and their congregations are essential in controlling the HIV epidemic. The Health Kiosk intervention explored the effectiveness of the use of faith worship centers as safe spaces to provide HIV services for faith communities.

**Description:** Health Kiosk intervention was implemented by World Vision in Gwanda and Gokwe North districts in Zimbabwe between March 2018 and February 2019. Faith leaders and church volunteers at worship centers were trained to create safe spaces, provide HIV information using locally available information, education and communication materials, and refer church members for HIV testing at health facilities. Faith worship centers received booths for HIV information dissemination. In collaboration with the Ministry of Health, church volunteers were trained to provide and link members to HIV prevention services, support HIV testing at faith centers, collect and record project data weekly to measure impact.

**Lessons learned:** A total of 101 faith leaders and 93 church volunteers from 53 faith centers were trained to implement Health Kiosk. Over a 12-month period, the number of people requesting and receiving HIV information at the worship centers increased by 350% and 316%, respectively; 35% of the members sought information on HIV, 24% on maternal and child health, and 35% on other health matters. The number of people who had HIV tests and received their test results increased by 151% with HIV test positive yield of 5.7%. Collaboration was fostered between the pastors, church volunteers, referral health facilities and the Ministry of Health.

**Recommendation:** Health Kiosk at faith worship centers manned by trained church volunteers is an essential and effective entry point for HIV prevention services. The use of Health Kiosk approach should be maximized and mainstreamed into the general HIV prevention care and treatment programs. As faith centers volunteers were more effective in community mobilization, the model provides additional community health resources to support health initiatives.

**Key Words:** Faith centers, HIV testing, FBOs, health kiosk, Zimbabwe

## THPEC101

### Mining the Same Field: Declining Index Testing Yields - The Experience of USAID DISCOVER-health in Zambia

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**Issues:** HIV index testing (indexing) and partner notification services (PNS), voluntary listing of recent sexual partners/biological children  $\leq 12$  years of index clients (contacts), is an effective strategy for early diagnosis and treatment of HIV+ contacts. Studies show indexing yields of 35 to 62%. We present the experience of the USAID-DISCOVER Health project (DISCOVER) implemented by JSI, an early adopter of indexing in Zambia, showing diminishing indexing yields over time within a given catchment area, with fewer untested and more known HIV+ contacts.

**Descriptions:** DISCOVER began providing HIV indexing/PNS in July 2017, quickly applied lessons learned, and fully scaled-up to all 112 projects sites by July 2018. Adaptation of training materials; training of counselors/service providers; development of SOPs and M&E tools preceded rollout. PNS is not the norm in Zambia and was initially uncomfortable for counselors. Investments in training/mentorship, necessary/critical for success, paid off with high yields. In January 2019, further scale-up required sites to index at least 60% of ART clients, prioritizing newly diagnosed clients and immediate ART linkage. Results are presented on elicited contacts  $\geq 15$  years for April 2018 through June 2019. In the initial phase (Apr-Dec 2018): 6,336 clients were indexed with 5,542 contacts elicited; the indexing yield rate was 42% (1,790/4,277); and the overall positivity rate was 50% (2,483/4,970) including 693 known HIV+. In the aggressive scale-up phase (Jan-Jun 2019): 9,268 clients were indexed with 8,122 contacts elicited; the indexing yield was 33% (1,826/5,559); and the overall positivity rate was 49% (3,653/7,386) including 1,827 known HIV+. While the quarterly indexing yield showed a downward trend, the overall positivity remained constant, indicating effective contact elicitation.

**Lessons learned:**

- 1) Indexing is a highly effective modality to identify unknown HIV+ contacts, but its extensive implementation within a catchment area leads to reduced yield rates and an increase in contacts known to be HIV+; and
- 2) there is a possible catchment-area preventive effect of ART as more people in sexual networks are put on ART, with fewer new transmissions and declining indexing yields.

**Next steps:** Consider declining yields when setting site indexing targets; leverage identification of partners known to be HIV+ to immediately link those not on ART, to ART; and conduct HIV recency testing in catchment areas.

## THPEC102

### Outcomes and Factors Associated with Partner Notification and HIV Testing in Tanzania

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**Background:** There is growing evidence on high effectiveness of partner notification (PN) in reaching previously undiagnosed sexual partners in sub-Saharan Africa. Tanzania as other countries in the region has recently expanded PN in HIV testing services. However, this approach is unlikely to yield the expected results if not well practiced. This study aimed to identify gaps and provide recommendations to improve routine implementation of PN in northeastern Tanzania

**Methods:** Analytical cross sectional study was conducted across seven care and treatment centers in Kilimanjaro region from November 2018 to April 2019. A total of 297 newly diagnosed HIV infected clients with partner(s) in the past 24 months were enrolled and interviewer administered structured questionnaires were conducted two months after their first clinic visit. Chi-square tests, bivariate and multivariate logistic regression were used to determine significant differences and factors associated with PN and HIV testing.

**Results:** Two-thirds 195 (66%) were females. Among those counseled for PN more than two-thirds 198 (68%) were index clients. The majority of index clients with partner(s) who were alive at the time of their HIV diagnosis, 165 (85%) consented for PN. They all chose passive PN with about half 102 (52%) successfully disclosing and suggesting PN to their partner(s). Successful disclosure and suggesting PN was associated with being married adjusted odds ratio (aOR 5.1, 95%CI: 2.4-10.9,  $p < 0.001$ ), in a relationships for > 10 years (aOR 4.9, 95%CI: 1.3-17.6,  $p=0.02$ ) and staying together with the partner(s) (aOR 3.4, 95%CI: 1.3-9.1,  $p=0.02$ ). Overall successful partner HIV testing was 53 (27%). This was associated with being married (aOR 3.4, 95%CI: 1.3-9,  $p < 0.02$ ) and staying together with the partner(s) (aOR 4.5, 95%CI: 1.3 - 15,  $p < 0.02$ ). Male sexual partner(s) had 60% lower odds of successful clinic referral and HIV testing after being notified (aOR 0.4, 95%CI: 0.2-0.9,  $p=0.02$ ). More than two-thirds 37 (67%) of those tested were HIV seropositive with 18 (78%) and 19 (59%) positivity rates among female and male sexual partners respectively.

**Conclusions and Recommendations:** Although testing successfully referred sexual partners yielded highly positive results, a lot of sexual partners were not successfully referred. More efforts are needed to improve PN emphasizing on those who are not married or staying together with their partners and in a relationship of < 10 years with more focus on male sexual partners.



## THPEC103

### Improving Efficiencies in Case Detection with Enhanced Peer Outreach Approach among Female Sex Workers in Malawi

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**Issues:** Malawi has adopted the UNAIDS 90-90-90 target to provide a continuum of care services to individuals most affected by HIV. Achieving epidemic control is contingent on achieving the UNAIDS targets. LINKAGES Project in Malawi has been working for the past five years to ensure that 90% of female sex workers (FSW) living with HIV know their status and get linked to sustained antiretroviral therapy. HIV case detection among FSW has decreased over the past five years of implementation starting from >50% in 2015 to < 15% in 2019 due to program saturation. To improve case detection, LINKAGES Project implemented enhanced peer outreach approach (EPOA) among FSW in Lilongwe, Blantyre, Mangochi and Mzuzu in February 2019. This abstract aims to share successes and lessons learnt in the implementation of this approach.

**Descriptions:** Enhanced peer outreach approach was implemented through outreach workers who identified and recruited FSW as peer mobilisers (PM). The recruited PM were sex workers from hard to reach categories such as high class, adolescent girls and young women (AGYW) in sex work, home based sex workers and those who work in geographical areas that are not easily accessible. Recruited peer mobilisers were oriented on the project and given a minimum of four coupons each to motivate peers with similar risk profiles for HIV testing services. Peer mobilisers were incentivized if their contacts successfully accessed testing services.

**Lessons learned:** Of the 1972 FSW tested for HIV from January to March 2019, 643 FSW (33%) were tested during a two week EPOA campaign in February. 112 FSW (17%) of those tested during EPOA were diagnosed positive. Comparatively across three performance quarters, case detection was highest in the period when EPOA was implemented (January-March) ranging from 16%-22% compared to 7%-17% in April -June 2019 and October- December 2018 when case detection ranged from 8%-17% across four LINKAGES districts.

**Next steps:** Implementing enhanced peer outreach approach offers an opportunity to reach hard to reach FSW and possibly test those that have never been reached with testing services within a short period. The approach recruits and incentivizes peer mobilisers with whom there is no need to invest in long term and costly capacity building processes. EPOA is an efficient strategy in improving case detection and improve coverage of programs since it reaches those that were not previously reached by the program.

## THPEC104

### Effectiveness of HIVST Distribution Models in the General Population in SSA: A Systematic Review

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**Background:** WHO recommends HIV self-testing (HIVST), but little is known about distribution models and support tools effective in reaching those in need of testing. To inform WHO HIV testing services (HTS) guidelines, we updated the 2016 systematic review to assess the effectiveness of various distribution models and support tools among the general population in sub-Saharan Africa (SSA).

**Methods:** The systematic review was conducted according to PRISMA statement. Electronic databases were searched for randomized controlled trials (RCTs) comparing HIVST to standard HTS (SOC) between 1 June 2006 and 4 May 2019. Studies were grouped according to the HIVST kit distribution method and type of support tools provided for self-testing. Random-effects meta-analysis of eligible studies were conducted for relative risks (RR) and 95% confidence intervals.

**Results:** We screened 5908 citations and identified 21 eligible RCTs which randomized 100,923 participants. Eight RCTs were community-based, six were facility-based and five involved secondary distribution of HIVST kits to partners. Meta-analysis showed HIVST doubled the uptake of testing (14 RCTs; RR: 1.99; 1.61-2.45). Several distribution models were associated with increased uptake of testing (HIVST distribution from facilities for testing within facilities or at home, distribution by women to male partners, distribution by HIV-positive clients to partners); uptake was similar to SOC in 4 community-based RCTs where results from individual RCTs varied. HIVST without or with various support tools (enhanced written/video instructions or hotline; group demonstration) were associated with improved uptake. The likelihood of an HIV-positive diagnosis (9 RCTs; RR: 1.10; 0.79-1.52) and linkage to HIV care among those diagnosed (7 RCTs; RR: 0.94; 0.81-1.08) was similar between HIVST and SOC. Greater absolute number of people were diagnosed and linked to services with HIVST. Linkage interventions that involved peer-navigators improved linkage rates compared to HIVST with no linkage support. There was no increase in harm or adverse events associated with HIVST.

**Conclusions and Recommendations:** A range of HIVST distribution models and support tools increase HIV testing resulting in additional people being diagnosed and linked to care. These effective models and strategies should be scaled up to reach those who remain undiagnosed.

## THPEC105

### Barriers and Facilitators to HIV Testing Services among Men in Nairobi, Kenya

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**Background:** In Kenya, the push for universal access to ART is a key policy goal that contributes directly to UNAID's 95-95-95 target for the country. However, as the country is scaling up access to treatment through the country's test and start program, there is a dearth of knowledge on factors that affect access to HIV testing services (HTS). This study is part of a larger SOAR project (Supporting Operational AIDS Research) to generate evidence to improve men's uptake of HTS for newly diagnosed individuals.

**Methods:** We conducted 86 in-depth interviews (IDIs) with participants in two study phases that were implemented from October 2017 to June 2019 in Nairobi, Kenya. Participants were HIV positive male clients (n=30), male and female clients seeking HTS (n=32) and male and female clients in HIV care (n=16). The interviews sought to establish barriers and facilitators to HTS among men. Data were thematically analyzed using NVIVO software.

**Results:** At facility, level positive provider attitudes was a significant factor for testing and subsequent linkage and retention in care. Additionally, most clients suggested that more efficiency is required in service provision, including flexible opening hours, to minimize time spent at a facility and that there should be privacy in waiting bays and during consultation. Individual related factors included anonymity, convenient proximity to workplace, and social support. Further, data shows that men typically seek HIV care and support services where they are assured of anonymity - typically far from their residences. Men also found it easy to seek services near their places of work. Additionally, support from significant others reinforced access to services - men with supportive social networks (including family and friends) were more motivated to access and continue in care.

**Conclusions and Recommendations:** Men need routine access to HTS that effectively address health facility and individual factors that delay access to services. Providing stigma free, anonymous and flexible opening hours can enhance access to services for men. Men also prefer testing at facilities situated near work places to minimize time spent away from work. Similarly, enhancing strong support structures for men both at home and in work places can provide an additional layer of needed to support to enhance access to services

## THPEC106

### Examining HIV Testing among Young People 15 - 19 Years of Age in Namibia Planned Parenthood Association Clinics, 2015 - 2018

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**Background:** HIV Testing and Counselling is the entry point to HIV prevention, treatment care and support. Namibia has HIV prevalence of 12.6% and is estimated that 176 000 adults over the age of 15 years are living with HIV/AIDS. The current HIV prevalence for the age group of 15 - 19 years is 4 percent. The prevalence was higher among women aged 15-24 years (5.4%) than among men aged 15-24 years (2.4%). Therefore, the objective of the secondary data analysis was to describe the trend of HIV testing among age group of 15 - 19 during the period of 2015 - 2018 and to examine the HIV positivity rate by sex and geographical location.

**Methods:** We conducted retrospective descriptive cross sectional study. We conducted record review of HTS data from the seven (7) health facilities which are managed by Namibia Planned Parenthood Association (NAPPA) for the period of 2015 to 2018. The NAPPA clinics are located in Zambezi, Kavango East, Ohangwena, Oshikoto, Khomas and Erongo regions. We extracted the HIV testing data for the population of interest using Microsoft Excel and Epiinfo version 7.2. Authorization to conduct the data analysis was obtained from NAPPA management and for ethical considerations, patient's identifying information was withheld from the data base under review. We generated frequencies and proportions using Epiinfo and Microsoft excel.

**Results:** Out of 56,224 tested clients, the age group of 15 - 19 years accounted for 20% (11066). Females were 74% (8165/11,066) and males 26%( 2921/11066). HIV positivity rate for female clients was 2.1% (167/7998) while for male clients, 0.5% (16/2921). The HIV positivity rate among female clients age 15 - 19 years was highest in Zambezi with 5.4% (74/1360) and lowest in Khomas, 0.9% (28/2843). HIV testing for 15 - 19 age group increased from 12% in 2015 to 21% - 22% by 2018 respectively.

**Conclusion:** Female clients in the age group of 15 - 19 have three times higher HIV burden than male clients of same age. Zambezi region has highest concentration of HIV infection among young girls. Recommend for targeted HIV prevention and integrated Sexual Reproductive Health/HIV services for youth particularly for adolescent girls and young women.

**Keywords:** HIV, Testing, Young People, Namibia

## THPEC107

### Scale-up of Assisted Partner Services (aPS) in Mozambique: Expanded Pilot Program Data Suggest that APS Is Scaleable and Identifies Large Numbers of HIV-infected Sex Partners

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**Background:** Randomized trials have shown that aPS is efficacious in increasing sex partner HIV testing, and World Health Organization guidelines recommend that all persons diagnosed with HIV infection be offered aPS. In March 2017, Mozambique initiated a 12-month expanded pilot program of disclosure counseling that incorporated elements of aPS

**Methods:** We analyzed program data collected between March 2017 and September 2018 on persons with newly-diagnosed HIV infection (index patients, IPs) receiving aPS, their number of sex partners, and whether identified partners were notified, tested and diagnosed with HIV infection and linked to care and treatment. Data from aPS interviews and investigation outcomes were entered at clinical sites into an online database. We defined final partner testing dispositions  $\geq 30$  days following IPs' initial receipt of aPS

**Results:** The expanded aPS pilot was designed to introduce the intervention into 26 clinics in 11 Mozambican provinces over 12 months. In 14 sites (5 provinces) for which data were available for analysis, 27,883 persons tested HIV+, of whom 6,253 (22%) were offered aPS (range among sites 7-77%). Of those offered aPS, 2,151 (34%) were ineligible. 4,102 eligible IPs received initial aPS counseling, however 365 (9%) reported fear of intimate partner violence - including 299 (13%) of 2,252 eligible women IPs--and did not receive the intervention. The 3,737 IPs who received aPS named 4,106 sex partners (contact index=1.1), 272 (7%) of whom were known to have a prior HIV diagnosis. Of the 3,834 sex partners without a prior HIV diagnosis who were untested at time of IP interview, 2,639 (69%) HIV tested and 1,562 (59% of tested partners) were HIV+; 1,498 (96%) of HIV+ partners were linked to care and treatment. Four persons needed to be offered aPS to identify one HIV+ partner

**Conclusions and Recommendations:** Mozambique's expanded aPS pilot program successfully identified a large number of persons with previously undiagnosed HIV infection, with case-finding comparable to that observed during a smaller pilot effort. Program coverage was low, and varied greatly among sites demonstrating the need for better processes and dedicated staff to ensure that all persons who test positive are offered aPS.

## THPEC108

### Utilizing Index Testing among Female Sex Workers and their Non-paying Partners in Accra Metropolitan Assembly (AMA), Ghana in Achieving the 90-90-90 Target

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**Issues:** While implementing the USAID Care Continuum project in AMA, Hope for Future Generations realized that strategies which were being used did not yield the expected results in reaching hidden high risk FSWs and identifying new positive cases among them. Programmatic data collected over 6 months of HTS for FSWs indicated an average of 8% HIV positivity below the project target and national HIV prevalence of 11% among FSWs in 2018. This abstract however describes the adoption of Index Testing from a learning exchange activity and how it helped in identifying new HIV cases.

**Descriptions:** Through a learning exchange activity in June 2018 between HFFG and an organization (MICDAK Charity Foundation) providing HIV services to Men who have sex with men (MSM), HFFG adopted and adapted a strategy by identifying non-paying partners and regular clients of positive FSWs as index clients. The index clients were provided with HTS and those who reacted to HIV were used as seeds to identify new FSWs and index clients. The strategy was based on the assumption that when a non-paying partner or regular client of an FSW tests positive for HIV, then there is a high possibility of their other sexual networks being at risk of HIV. Index services including STI screening services are provided to index clients.

**Lessons learned:** From June, 2018 to June 2019, six peer educators identified 62 Non-Paying Partners (NPPs) of FSW between the ages of 15 and 50 years as index clients. 29 new FSW between the ages of 15 and 40 years were also identified as index clients by the NPPs. All 62 NPP and the 29 FSW were offered index testing services and they all accepted the services. 18% (4) and 14% (11) of the NPP and FSW respectively were diagnosed HIV positive and they have all being linked to HIV treatment. The HIV positivity for FSW and their NPPs who tested for HIV in the Accra Metropolis within the period was 9% and 17% respectively. The index testing strategy contributed an average of 1% and 65% HIV positivity among FSW and Non-PP respectively.

**Next steps:** Index testing has proven to be an effective strategy that should be used in HIV programming to help achieve the 90-90-90 targets. It needs to be elaborated in National procedures, guidelines and policies to help address issues with identifying new HIV cases. Also, learning exchanges with organizations in the same field helps in addressing common challenges and strengthening effective collaboration for HIV interventions for Key Population.

## THPEC109

### HIV Self-testing a Tool to Boost HTS and End Stigma among Young Women in Nigeria

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**Issues:** Female Sex Workers (FSWs) in Nigeria continue to be exceptionally vulnerable to acquiring HIV infection with a prevalence rate of 19.4% and 8.6% for brothel based and non-brothel Based FSWS respectively. HIV testing services has been advanced as a key prevention strategy for early diagnosis of HIV to reduce the risks of transmission and promote early treatment. However, HTS is not optimized among FSWS.

Increased access to HIV self-testing kits will help to increase the number of persons who know their HIV status, remove barriers to testing and end stigmatization. This study looks at exploring HIV self testing as a means of optimizing HTS uptake and break stigma barriers.

**Descriptions:** 168 young women (18 - 24) were recruited into a 3 cohorts and provided with education on HIV prevention and HIV testing three times a month for 2 months. During the sessions, the study participants were provide on practical education on how to test themselves individually using the HIV self testing kits and strictly adhering to the user manual of the test kit. HIV Counselling was provided to each study participant through Whatsapp. By the end of the 6<sup>th</sup> meeting, all participants had tested themselves for HIV and the persons that tested positive indicated interest in getting linked to care. Using google docs, a final evaluation questionnaire was sent to the study participants to measure their experience in self testing and satisfaction.

**Lessons learned:** 135 participants said that self test provided them an opportunity to feel in control of their health. All 168 study participants felt that self testing gave them an opportunity to choose how to disclose their status. The study participants who tested positive shared that they were able to deal with depression and denial through the help of the personalized counselling sessions that were provided through Whatsapp.

**Next steps:** Although self testing provides everyone an opportunity to be in charge of their health, self testing should go hand in hand with intensive counselling to ensure that young people that access self testing and test positive do not attempt to commit suicide. User experiences were positive and user satisfaction was high. A home testing service for HIV is feasible and relatively easy to implement as an additional tool to identify HIV infections.

## THPEC110

### Prévention du SIDA : 5 Ans d'Expérience de l'Approche Participative du CIRBA en Côte d'Ivoire

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**Indiquer le problème étudié, la question de recherche :** Devant le fléau du SIDA, des stratégies de réponse ont été développées par les pouvoirs publics et les communautés dont le dépistage volontaire et précoce du VIH par l'approche participative. Depuis 1998, le CIRBA a initié des activités de formation à la prévention du SIDA sur le lieu de travail et autres communautés.

L'objectif général est d'Améliorer les conditions de travail et de vie des communautés par une politique de non discrimination et de prise en charge confidentielle de membres vivant avec le VIH. Il s'agit de

(i) Faire connaître aux communautés les généralités sur le SIDA,

(ii) Amener les membres à se faire dépister volontairement et tôt.

**Méthodes:** De 2014 à 2018, le CIRBA a mené des activités de prévention en entreprise à Abidjan et en province. L'activité est menée par une équipe réduite de 4 personnes: 1 Formateur, 1 Technicien de laboratoire, 1 Infirmier et 1 Conseiller communautaire. La méthode d'intervention se décline par (1) la formation théorique de pairs éducateurs sur les connaissances, attitudes et techniques de communication sur le SIDA par groupe de 20 agents sur 3 jours, suivie d'une formation pratique dont la durée varie selon la taille de l'entreprise;

(2) la sensibilisation au dépistage volontaire visant à convaincre les membres des communautés (personnel, collaborateurs extérieurs et familles) de l'intérêt du dépistage volontaire, précoce, anonyme et confidentiel.

**Résultats:** Sur 5 années d'activité, 113 pairs éducateurs de 5 entreprises avec un effectif total de 1478 employés (100 - 831) ont été formés à la prévention du SIDA sur le lieu de travail. Le ratio éducateur-agent est de 113/1478 soit 0,08; 5 comités SIDA ont été mis en place.

30 entreprises ont bénéficié de la sensibilisation et du dépistage volontaire. En effectif cumulé, ce sont 3838 membres du personnel qui ont été sensibilisés et 5324 qui se sont dépistés (moyenne: 1065 dépistés/an). 3458 collaborateurs extérieurs et dépendants familiaux ont également été dépistés (moyenne: 692 dépistés/an).

De 2014 à 2018, la prévalence a baissé de 2,66% à 1%.

**Conclusions et recommandations:** Le CIRBA a développé une approche progressive, efficace et peu coûteuse de prévention du SIDA en milieu communautaire. L'approche permet aux communautés de s'approprier la lutte contre le SIDA freinant ainsi son évolution dans la société. La méthode doit être renforcée vue ses bons résultats sur la prévalence dans la population.



## THPEC111

### **Increased Case Finding and Linkage to Treatment through HIV Self-testing Integration into Community-based HIV Testing Services in South Africa**

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**Issues:** Closing the testing gap and diagnosing the remaining 15% of people living with HIV (PLHIV) by 2020 is important to the success of the South African HIV response. Though South Africa has made significant progress on reaching the first 90, linkage to and retention on treatment remains a challenge. This analysis aims to assess the contribution of HIV self-testing (HIVST) on increased case finding and linkage to treatment among index partners.

**Descriptions:** This is a retrospective descriptive analysis of programme data for seven-months from Ekurhuleni District in South Africa. HIVST was integrated into community-based conventional HIV testing services (CHTS) to reach partners of clients who test HIV positive. A self-test kit was offered to the regular sexual partner/s of all clients who tested HIV positive. The test kit was offered to the primary recipient to encourage partner testing and linkage to treatment. Index partner/s currently taking antiretroviral treatment (ART) or Pre-Exposure Prophylaxis (PrEP) is not eligible for self-testing. Home visits were carried out through appointments to offer confirmatory testing and clients who tested HIV positive were offered physical escort to nearest healthcare facility for linkage to care.

**Lessons learned:** The integration of HIVST into CHTS has shown different trends in programmatic positivity rate and linkage to treatment data. A total of 4,406 index patients were identified, 416 clients accepted HIVST kit for their partners. During the period under review, the positivity rate among index partners tested using the provider referral was 53% (2132/3990) compared to the HIVST integrated approach at 76% (316/416). In addition, the linkage rate among clients from the provider referral was 54% (1155/2132) compared to the HIVST integrated approach of 89% (282/316) within 14 days.

**Next steps:** HIV self-testing has shown to increase case finding and increase linkage to treatment among index partners. HIVST has shown efficiency in case finding rate on fewer clients tested. Further analyses are underway to compare retention in care among the provider referral and HIVST approaches.

## THPEC112

### **Prévalence et Séroconversion du VIH Chez les Femmes Enceintes à N'Djamena, Tchad**

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**Introduction:** L'infection à VIH chez la femme enceinte constitue un risque pour le nouveau-né et en particulier dans les pays en voie de développement. Le virus peut se transmettre de la mère à l'enfant au cours de la grossesse ou pendant l'accouchement. L'objectif de cette étude est de déterminer la prévalence du VIH chez les femmes enceintes et les nouvelles infections au cours de la grossesse au Tchad.

**Méthodes:** Une étude préliminaire a été effectuée de 2013 à 2015 à l'hôpital de la mère et de l'enfant. Les femmes enceintes ont été conseillées et dépistées au VIH conformément à l'algorithme national utilisant les tests Détermine VIH 1 & 2 et Immunocomb II bispot VIH 1 & 2. Les femmes testées séronégatives pendant les consultations prénatales (CPN) et qui ont accepté un second test en salle d'accouchement ont été dépistées. Les données collectées ont été saisies et traitées à l'aide de logiciel Access Microsoft office 16 et SPSS version 18.

**Résultats:** Au total 6080 femmes enceintes ont été dépistées pendant les CPN et dans la salle d'accouchement. Sur les 6080 femmes testées, 5943 (97.4%) ont été séronégatives à VIH1 & 2 et 159 (2.6%) séropositives à VIH1. Des 5943 femmes avec statut négatif à VIH 1, 1333 ont accepté le second test en salle d'accouchement et dont 10 tests ont été positifs à VIH 1. Le taux de nouvelles infections a été de 0.75%.

**Conclusion:** Cette étude a permis de déterminer la prévalence du VIH chez les femmes enceintes. Elle révèle également qu'il est important et nécessaires de répéter le dépistage en salle de naissance compte tenu de la possibilité des nouvelles infections ou de séroconversions au cours de la grossesse.

## THPEC113

### **Knowledge on Mother-to-Child Transmission (MTCT) of HIV among Women in Nigeria: Evidence from the Multiple Indicator Cluster Survey (MICS)**

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**Background:** Mother-to-Child Transmission (MTCT) of Human Immunodeficiency Virus (HIV) occurs during pregnancy, childbirth, or breastfeeding and accounts for a significant proportion of HIV infections in infants and children. In the absence of adequate intervention, the risk of transmission varies from 5% - 10% during pregnancy, 10% -15% at labour/delivery, and 5%-20% through breastfeeding (WHO, 2015). Studies have found that limited knowledge exist on the risk factors, correlates and determinants of MTCT, hence this study examines knowledge on MTCT among women in Nigeria.

**Methods:** Using the women dataset of the recently conducted Multiple Indicator Cluster Survey (MICS) in Nigeria (n=3940), chi-square tests and multinomial logistic regression were employed to analyze the data in Stata 14.

**Results:** Result show that 60% of women in Nigeria had adequate knowledge on MTCT. Further, statistically significant associations were found between knowledge on MTCT and education, wealth quintile, zone of residence, place of residence, exposure to media (radio and TV), previous knowledge on HIV/AIDS, and received counsel during postnatal care at ( $p < .005$ ). Multivariate analysis revealed that residence in urban area, listening to radio and prior knowledge of HIV transmission mechanisms for general population were the most important factors responsible for women having knowledge on MTCT in Nigeria.

**Conclusions and Recommendations:** This study has shown that few factors determine knowledge on MTCT among women in Nigeria, therefore, it is imperative to explore other channels of education and information dissemination on HIV/AIDS especially MTCT as this will enhance prevention mechanisms and provide information on care and treatment. Also, consideration should be given to the socio-demographics of information recipients as this enhances understanding of message being received.

## THPEC114

### Barriers for Low Coverage of Beginning Pediatric Antiretroviral Treatment in Rural Districts of Zambézia, Mozambique

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**Background:** Low national coverage of pediatric antiretroviral treatment (ART) initiation (43%) is of concern to Mozambique's health authorities, knowing that timely initiation potentially saves lives. This coverage is lower in Zambézia (33%). The aim of this study is to evaluate the barriers that could have contributed to late ART initiation among children younger than 9 months.

**Methods:** An observational, cross-sectional study was conducted in the districts of Quelimane, Namacurra, and Maganja da Costa, in nine health facilities (HF). Secondary data from children enrolled in the child at risk clinic period between April 2016 to March 2017 were used, with systematic probabilistic sampling. Early infant diagnosis indicators were analyzed through descriptive statistics and chi-square and t student tests.

**Results:** Of the 969 children enrolled, 949 were tested, of which 74% (95% CI: 71.2 - 76.8) before eight weeks. Early testing was a protective factor [OR 0.36 (95% CI: 0.23 - 0.57);  $p < 0.001$ ]. About 5% (95% CI: 3.1 - 6.4) of HIV PCR-DNA results did not return to the HF. The average time for results to return to the HF from the reference laboratory was 42 days (95% CI: 39-45). Nearly 81% (95% CI: 78.4 - 83.6) of the mothers returned to receive the results, with an average time of 33 days (95% CI: 30-35). The HIV PCR-DNA positivity rate was 9% (95% CI: 7.1 - 10.9). Of the 82 HIV-positive infants, the results were delivered to 76% ( $n = 62$ ), who all started ART. There were no association between the distance from the home to the HF for the onset of ART [OR 0.8 (95% CI: 0.28 - 2.28);  $p = 0.671$ ]; there was an association between the mother being on ART prior to delivery and the initiation of ART [OR = 4.16, (95% CI: 1.42 - 12.26);  $p = 0.007$ ].

**Conclusions and Recommendations:** In this analysis, nearly 3/4 of the children were tested within the first two months. Time for return of results is high, and almost a fifth of the mothers did not return to receive results. It is recommended to expand early infant diagnosis Point-of-Care to minimize time to results receipt and the immediate initiation of HIV-positive children. Identifying HIV and initiating early ART among women of reproductive age is crucial to prevent vertical transmission.

**Keywords:** Pediatric ART; Coverage; Barriers; Mozambique

## THPEC115

### Assessment of Repeat HIV Testing amongst Pregnant and Postpartum Women in Kisumu County, Kenya

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**Background:** HIV testing of pregnant and postpartum women is key to prevention of mother-to-child transmission (PMTCT) of HIV, treatment for pregnant and postpartum women living with HIV, identification of untested positive partners and timely care for HIV infected children. An important fraction of infant infection occurs from mothers who tested HIV seronegative earlier in pregnancy because of incident maternal HIV infection during pregnancy or in the postpartum period. Early diagnosis of such incident HIV infection provides opportunity for additional interventions, including immediate maternal initiation on treatment and infant prophylaxis. Little data are available on the frequency of repeat HIV testing across the antenatal-postpartum continuum, despite global recommendations to conduct such testing during the third trimester, labor/delivery and postpartum period. Our objective was to determine the frequency of repeat HIV testing amongst pregnant and postpartum women in programmatic settings.

**Methods:** We conducted a cross-sectional evaluation in three health facilities in Kisumu County, Kenya. A convenience sample of 300 HIV seronegative women who were attending during the third trimester ( $\geq 27$  weeks gestation), at delivery, or at six weeks or six months postpartum were surveyed while leaving the health facilities after being served through a short questionnaire to determine whether they were tested for HIV. We estimated the prevalence of repeat HIV testing; we used log binomial regression to assess the predictors of repeat HIV testing.

**Results:** The median age was 23 (interquartile range 20-27) years. Three quarters (76%) of the women were married and 92% had at least one child. Overall, at 57.3% (95% CI 51.5-63.0) of visits, repeat HIV testing was done; none of the women tested positive for HIV. The frequency of testing was higher within the antenatal period (54/72, 75.0%) compared to during delivery (43/64, 67.2%), and during the six weeks (56/121, 46.3%) and six months postpartum periods (19/43, 44.2%); in multivariate analysis, the postpartum period was associated with reduced likelihood of repeat HIV testing.

**Conclusions and Recommendations:** Repeat HIV testing amongst pregnant and postpartum women fell short of the guideline goals. These results highlight the need to evaluate barriers to HIV testing within PMTCT settings and opportunities for improving testing for maximal benefit of pregnant and postpartum women, their partners and their children.

## THPEC116

### The Role of Accompaniment and Transportation Services in the Prevention of Mother to Child Transmission of HIV: The SMILE Project Approach

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**Issues:** Each year over a million infants are born to HIV infected mothers despite scale up of PMTCT program, a significant proportion of exposed children still become infected with HIV in resource-limited settings because of loss to follow-up (LTFU) of mother-baby pair. Thus, militating against the achievement of the UNAIDS 90-90-90 targets of ending AIDS epidemic by the year 2020.

**Descriptions:** Sustainable Mechanism for Improving Livelihoods and Household Empowerment (SMILE) project implemented by a consortium led by Catholic Relief Services (CRS) with USAID funding. SMILE project aims at supporting 600,000 children and 150,000 caregivers to reduce the burden of HIV through various innovative care and support activities such as accompaniment and transport services that enables the PLHIV to regularly go for drug refill, attend PMTCT services in company of a trained community volunteer, have improved adherence to ART, desire hospital delivery, uptake Exposed Infant Baby Diagnosis (EID), retained in PMTCT services until 18 months, strengthen their resilience to associated vulnerability and empowered them with livelihood opportunities. In view of the need to ensure that all pregnant PLHIV are retained on PMTCT and the exposed baby given opportunity to undergo EID services at 6 weeks according to WHO guidelines, SMILE provides pregnant PLHIV with transportation money for drug refill, attend ANC and accompaniment services by a community volunteer residing within the community of the pregnant woman as a support to ensure that they reach the facility without difficulty.

**Lessons learned:** SMILE supported a total of 506 pregnant women to regularly go for drug refill and attend PMTCT services out of which a total of 498 delivered at the hospital and the baby received Nevirapine within 72 hours. Eight (8) did not deliver at the hospital and their outcome could not be tracked. All the 498 exposed infants delivered at the facility were accompanied and transported to receive EID. 497 came out as negative while 1 is positive. Thus, making the prevalence of HIV among exposed babies whose mothers were supported to PMTCT sites and had hospital delivery as 0.2%. The 497-baby remained negative at 18 months.

**Next steps:** This shows that escort and transport services is an effective strategy to prevent loss of mother-baby pair to follow up during PMTCT and prevent HIV infection among exposed babies.

## THPEC117

### **A Cross Sectional Analysis of Profile of Mothers/Guardians with LTFU HIV Exposed Infants within the Prevention of Mother to Child Transmission Program in Rwanda**

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**Background:** Lost to follow up (LTFU) affects HIV prevention programs in Sub Saharan Africa (SSA). Evidence indicate that many HIV exposed children in Sub Saharan Africa fail to benefit from proven and effective interventions due to LTFU, this lead to delays or no initiation of intervention thereby contributing to child morbidity and mortality. This study aimed at knowing the profile of mothers with LTFU HIV exposed children within PMTCT program in Rwanda.

**Methods:** A cross sectional study involving all health facilities with one or more reported LTFU HIV exposed children registered within PMTCT program in Rwanda was conducted. LTFU HIV exposed infants considered in the study were children born in the three-month window period October to December for the years 2013, 2014 and 2015 respectively. A chart review of their records was done and an active retracing exercise was done in the community. In addition, a structured questionnaire was administered to the mother of the LTFU children.

**Results:** 181 children were identified as LTFU. Of 181 children retraced, 9.5%, 95% CI (5.9-15.1) of the LTFU infants were found in care of their guardians and 67.7% were from discordant couples. There was a higher likelihood of loss to follow-up if the male partner was HIV positive 41.5 %, 95% CI (33.1-50.5) compared to when the mother was HIV positive 26.2% 95% CI (19.3-34.4). 46.4% and 73% knew that HIV can be transmitted from an HIV positive mother to her child during pregnancy and during delivery, breastfeeding respectively. . The results showed a gap in knowledge for the follow up calendar for the HIV-exposed infants: only 68.2%, 52.5% and 44.7% knew that a child born to an HIV Infected mother is supposed to be tested for HIV at 6 weeks, 9 months and 18 months of their birth, respectively. 27.6% (50/181) did not know the importance of taking their HIV-exposed infants to health facility; 7.8% (14/181) reported that the parents of those infants had died, 8.9% had problems related to the accessibility to health facility while 10.1% reported that one of the parents refused to take the child to health facility for follow up.

**Conclusion:** LTFU among HIV exposed infants is a major concern to PMTCT program as non-retention may lead to higher MTCT rate. To improve the PMTCT retention and maximize the exposed infants follow up, health care providers need reinforce active retracing of LTFU in the community and increase knowledge of mothers/guardians about HIV,ART and PMTCT services.

## THPEC118

### Outcome of HIV-exposed Infants in Nigeria: Findings from a Prevention of Mother-to-Child Transmission of HIV Cascade Evaluation Study

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**Background:** In 2016, Nigeria accounted for 37,000 of the world's 160,000 new cases of babies born with HIV. Prevention of Mother-to-Child Transmission of HIV (PMTCT) plays a critical role in reducing the number of children being infected with HIV. The PMTCT cascade represents a complex system of sequential "interdependent steps that pregnant women and HIV exposed infants pass through to receive appropriate HIV services. This paper showcases outcome of HIV-Exposed Infants (HEI) in Nigeria while also identifying the gaps along the HEI cascade of care.

**Methods:** Data used in this paper was extracted from findings of the PMTCT cascade evaluation study conducted in 2017. This was a retrospective cross-sectional study conducted in twelve HIV high burden states in Nigeria. 2014 HIV programmatic data was used to select two states with the highest HIV positivity rates in the six geo-political zones. PMTCT related source documents were reviewed and clinical data abstracted for pregnant women who had received PMTCT services and all infants delivered by the HIV positive women during the study period (2014-2015) at 112 health facilities. Stratified random sampling was used to select health facilities from each facility level. Stata version 14 was used for data analysis.

**Results:** Of the 3,716 HIV-Exposed Infants (HEI) whose records were available, 3,423 (92%) received ARV prophylaxis and 2,456 (66%) had Dried Blood Spot sample taken for Early Infant Diagnosis- PCR. 2,170 infants had PCR results, out of which 1,054(49%) infants had evidence of final outcome at 18 months. Thus, only 28% of the 3,716 HIV exposed infants had a documented final HIV status outcome at 18 months. 39 (3.7%) of those with final outcome turned out to be HIV positive and 14 (36%) of the HIV positive infants had records of linkage to initiate pediatric ART.

**Conclusions and Recommendations:** The results revealed a large number of drop-offs along the infant cascade of care with a very low percentage of HEI whose final HIV status outcome at 18 months was known, and a low proportion linked to care. To address these gaps, Nigeria urgently needs to conduct operations research to identify evidence-based strategies that can increase retention of HEI along the cascade of care, strengthen Early Infant Diagnosis referral network and linkages, and ultimately improve HEI outcome.



## THPEC119

### Strengthening Community HIV/Aids Response in Bakassi

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**Issues:** Mother to child transmission(MTCT)of HIV and antenatal consultation(ANC) still a call for concern in post conflict Bakassi(23%) despite efforts to sensitize and educate the population on HIV/PMTCT.

There are critical gaps owing to the challenges of delivering interventions in a border, post-conflict and hard-to-reach area: Cultural believes, insecurity, frequent cross border movements affecting retention, limited access to services due to the high cost of movement/ANC fee, limited government interventions (infrequent supervision, absenteeism, inadequate tools etc) further affect improvement on key health indicators especially MTCT.

**Descriptions:** While aligning to the UNAIDS 90-90-90 goal, Cameroon's government Test and Treat for all, and differentiated models of care, a robust community system for optimal case finding, and treatment was used during this phase of the project which was an extension to a phase that ended in September 2017. In the pilot phase Community Leaders were only educating and referring pregnant women (PW) to health facilities. So, a key strategy in this phase was using an integrated cohort of Primary Health Care workers(PHC) to deliver services at the door steps of every PW, follow-up exposed babies and systems strengthening. Project ran from February 2018 to January 2019 and covered 04 health areas of Bakassi district.

**Lessons learned:** Eighteen(18) community leaders(CLs) were trained to carryout community-based HIV testing and 20 Traditional Birth Attendants(TBAs) were trained and engaged to link pregnant women (PW) to health centers or CLs for HIV testing at home. Further, 09 nurses were trained to provide quality PMTCT services and collection/transmission of PCR samples. A total of 17286 persons were educated on PMTCT/HIV, with 6917 women and 8562 men. A total of 986 PW benefited from PMTCT services from which 499 were home based and 487 health facility based. 79 PW tested Positive with 78 being placed on treatment, 140 non-PW, 163 men and 06 children tested positive during outreach clinics and 121,84 and all 06 children placed on home treatment respectively. And 09 children who were due for ELISA during this phase their samples were collected and transmitted with all testing negative.

**Next steps:** Viral load testing for those placed on treatment during this period to ascertain the 3<sup>rd</sup> UNAIDS goal. More diversity of PHC workers to bring PMTCT services at the door step of every PW and home-based dispensation of ARVs.

## THPEC120

### **Patientes sous ARV, 2ème Ligne, Incidence du Suivi Biologique dans la Prévention de la Transmission Mère Enfant, Ouagadougou / Burkina Faso**

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**Contexte:** L'accessibilité aux ARV au Burkina Faso est effective depuis 2005. Le nombre de PVVIH est estimé à 17 542. Nous constatons un nombre grandissant de patient qui sont sous le traitement ARV 2ème ligne soit 30%. La majorité est composée de femme représentant les 68%. Les patientes sous ARV 2ème ligne rencontrent des difficultés liées au désir d'enfant. Notre étude vise à évaluer l'impact de la réalisation des examens Biologique sur la PTME car nous ne disposons pas de donnée à ce sujet.

**Méthodes:** Etendue sur la période 2014 à 2017, nous nous sommes intéressés aux patientes PVVIH identifiées lors des consultations médicales, club d'observance et groupe d'auto support dans le District Sanitaire de Boulmiougou et le CHU Yalgado OUEDRAOGO. L'étude s'est focalisée sur les femmes enceintes de la tranche d'âge de 19 à 44 ans. Elles ont subi des examens biologiques avant et tout au cours de la grossesse. Après l'accouchement le nouveau-né a été testé en rapport avec d'autre groupe témoin.

**Résultat:** Sur un ensemble de 403 femmes enceintes, il y a eu 13 cas d'infection de nouveau-né (3,2 infections /100 enfants-années). 9 cas d'infections (69,2%) étaient liés à des complications survenues au cours de l'accouchement et de la grossesse. Ses complications n'ont aucun lien avec le suivi par les examens biologiques. Dans les derniers mois de grossesse juste au moment de l'accouchement nous avons constaté que les charges virales étaient devenues indétectables chez 95% des femmes, et les taux de CD4 supérieurs à 500 par millimètre cube chez 95% des femmes. Cela a réduit considérablement les risques de transmission mère à enfant. Les analyses de sensibilité ont permis d'évaluer l'incidence de ses examens dans la PTME.

**Conclusion et Recommandation:** Nous avons constaté la réduction de l'infection à VIH du nouveau née chez les femmes enceintes de 19 à 44. Le suivi par les examens biologiques des patientes sous ARV 2ème ligne a une incidence sur la réduction du risque d'infection dans le cadre de la Prévention de la Transmission de la Mère à l'Enfant (PTME).

## THPEC121

### Évaluation Moléculaire du Taux de Transmission Mère-enfant du VIH-1 au Sénégal

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**Contexte:** Le dépistage précoce et la mise sous ARV des enfants infectés de mères VIH+ reste une priorité de santé pour limiter l'expansion de l'épidémie VIH/SIDA et sa mortalité. En 2017 au Sénégal comme d'autres pays de la sous-région seulement 23% des enfants nés de mères infectées par le VIH-1 ont bénéficié du test PCR. La vulgarisation de ce test moléculaire de diagnostic précoce est nécessaire pour apprécier l'efficacité des programmes de prévention de la transmission mère-enfant du VIH-1 (TME) dans les pays à ressources limitées.

**Objectif:** Le but de notre étude est d'évaluer le taux de transmission mère-enfant du VIH1 au Sénégal chez des enfants de moins de 18 mois et nés de mères séropositives au VIH1.

**Matériel et Méthode:** Cette étude réalisée au laboratoire de biologie moléculaire du programme SIDA des forces armées Sénégalaises entre septembre 2016 et mai 2018 portait sur 393 enfants nés de mères VIH<sub>1</sub>+ provenant des différentes structures sanitaires du pays. Les prélèvements sont du sang total sur papier buvard (DBS). Le diagnostic précoce des enfants nés de mères VIH<sub>1</sub>+ a été fait par PCR VIH-1 sur Cobas®AmpliPrep/Cobas®TaqMan®HIV-1 qualitative V.2.0 (Roche molecular System, Inc). Les données ont été saisies sur Excel 2010 puis analysées avec le logiciel R Studio version 099.902 de 2016 pour windows ainsi que sur XLSTAT 2018 version 1. Le seuil de signification statistique a été fixé à  $p < 0,05$ .

**Résultats:** Sur 393 enfants nés de mère séropositives, 28 sont positifs à la PCR soit un taux de TME du VIH-1 de 7,1%. Il n'y avait pas d'association significative entre le taux de TME et les caractéristiques sociodémographiques suivantes: le sexe, la prophylaxie et la région géographique d'appartenance du nourrisson, ( $p > 0,05$ ). La TME du VIH-1 était significativement associée aux facteurs suivants: la prophylaxie de la mère, l'ethnie et le type d'allaitement ( $p < 0,05$ ).

**Conclusion:** Notre taux de transmission est plus élevé que ceux décrits dans les enquêtes nationales précédentes de 2010, 2014 et 2016 qui était respectivement de 4,2%, 3,1% et 3,3%. L'augmentation de notre échantillonnage s'avère nécessaire pour une meilleure comparaison.

## THPEC122

### La Référence Active des Femmes Enceintes en Consultation Périnatale par les Agents de Santé Communautaire vers les Formations Sanitaires et la Mise sous Traitement des Cas Positifs au Cameroun

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**Questions:** Comment booster le taux de fréquentation des femmes enceintes en première Consultation périnatale et mettre sous traitement les cas positifs dépistés ?

**Description:** Plusieurs stratégies mises sur pied pour le dépistage chez les femmes enceintes VIH + et leur mise sur traitement n'ont pas pu booster le taux de fréquentation des femmes enceintes en consultation périnatale au Cameroun. Care and Health Program a implémenté la référence active des femmes enceintes en première consultation périnatale par les agents de santé communautaire depuis 2015 avec des résultats très encourageant. Environ 250 agents de santé communautaire identifiés dans 07 Districts de Santé de la région du Littoral à savoir : Deido, Bonassama, New-Bell, Nylon, Cité des palmiers, Bangue et Logbaba ont été formés sur les techniques de mobilisation communautaires. Ces derniers dans leurs différentes aires de santé identifiaient les femmes enceintes n'ayant pas encore fait leurs premières consultations périnatales, proposaient à celles-ci les différentes formations sanitaires offrant le service et proche de leurs domicile, ensuite effectuaient la référence active vers les formations sanitaires de leur choix avec des fiches de référence. Elles étaient reçues par les prestataires au services de consultation périnatale ; celles parmi elles testées positives étaient mises sur traitement antirétroviral.

**Leçons apprises:** De janvier 2017 à mars 2019 6023 femmes enceintes ont été référées en première consultation périnatale par les agents de santé communautaire et ont fait le test VIH, dans les formations sanitaires de 7 district de santé du littoral, 172 ont été identifiées positives et mises sur traitement antirétroviral. La référence des femmes enceintes en consultation périnatale par les agents de santé communautaires est une stratégie efficace pour booster le taux de fréquentation des femmes enceintes en première consultation périnatale, le dépistage et la mise sur traitement de celles qui sont identifiées positives.

**Prochaines étapes:** Pour une meilleure implémentation un plaidoyer continu auprès des responsables communautaires des districts de santé sur la stratégie et le recyclage des agents de santé communautaire sur les techniques de mobilisation communautaire ainsi que des prestataires des services de consultation périnatale sur le counseling est nécessaire. Il est également recommandé de récompenser les agents de santé communautaire sur la base de leur performance.

## THPEC124

### **Male Involvement in Prevention of Mother to Child Transmission of HIV among Women Attending HAART Clinic in Isanlu, Nigeria**

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**Background:** Nigeria still accounts for a large proportion of the global burden of mother to child transmission (MTCT) of HIV and despite global achievements to eliminate MTCT, Nigeria is yet to meet up. Recent findings put these challenges being experienced on a number of factors, chief among them being minimal male involvement, poor community participation and inadequate numbers of facilities for Early Infant Diagnosis (EID) of HIV.

**Methods:** A descriptive cross-sectional study was carried out to determine the level of male involvement in the prevention of mother to child transmission of HIV among women attending HAART clinic in Isanlu, Kogi state. Questionnaires were administered to 215 randomly selected participants and the data collected was analyzed using Statistical Package for Social Sciences (SPSS) version 20.0

**Results:** Male involvement in PMTCT was found to be moderate with 133 (61.9%) of respondents having high level of male involvement in PMTCT as deduced from questions on type PMTCT related support provided by their partners. Majority of the participants believe that male involvement is beneficial in increasing the chances of baby's survival (85.6%), adhering to medications (86.0%) and preventing mother to child transmission of HIV (83.3%). The outcome of Pearson chi-square analysis revealed that there is a statistically significant difference ( $P < 0.05$ ) between partner's age group (0.002), partner's educational status (0.004), partner's HIV status (0.000), marital status (0.001), disclosure (0.000), waiting time in the clinic (0.000) and the level of male involvement in PMTCT.

**Conclusions and Recommendations:** Influence of male partners on the overall health behaviors and outcomes of women living with HIV in a culturally sensitive setting like Nigeria is far reaching and it is important programs harness this towards catching up with global targets. Reaching male partners with necessary information and ensuring a more conducive system to enhance their support is recommended to be part of a holistic approach to eliminate MTCT of HIV.

## THPEC125

### The Unfinished Business: Last Mile Efforts to Reach Elimination of Mother to Child Transmission in Rwanda

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**Background:** Mother-to-child transmission of HIV continues to be a public health threat despite improved programmes for prevention of new HIV infections among infants. New programs such as Option B+, where the pregnant woman receives lifelong ART and the infant receives prophylaxis at birth have been established and widely available. Since the adoption of PMTCT Option B+ in 2012, Rwanda has observed a significant decline in MTCT rate to less than two percent in the last three years for children whose mothers have been followed in the PMTCT program. Less is known about the risk factors of mothers who continue to transmit HIV to their respective infants.

**Methods:** Point of care testing for Early Infant Diagnosis (POC-EID) was introduced from March 2017 in 141 health facilities in Rwanda. A cohort of infants born to HIV positive women was followed for 24 months post-partum. The providers were trained to test HIV exposed infants from all entry points; PMTCT or Provider Initiated Testing and Counseling services (PITC). All test results were keyed into the electronic system for monitoring and analysis. A multivariate analysis was used to analyze factors associated with mother to child transmission.

**Results:** Between March 2018 and June 2019, 4712 children were identified and tested, 4449 (94%) through PMTCT and 263 (6%) through provider-initiated testing and counselling services (PITC). Among all children enrolled, 136 (2.94%) were confirmed HIV infected and initiated ART treatment. Of these, 79(58.1%) came through PMTCT services and 57 (41.9%) through PITC. HIV positivity rate was 1.3% among mothers who received ART before delivery, 15.4% among mothers who started ART during and after delivery, and 40.2% among mothers who were never started ART at time of enrollment. In multivariate analysis, children who enrolled through PITC and those who did not receive ART prophylaxis were more likely to be infected; AoR 7.31, [95% CI: 3.69 -14.48] and AoR 7.93, [95% CI: 4.18 -15.03] respectively.

**Conclusion and recommendations:** High number of HIV infected children are identified out of PMTCT services and their mothers may have missed PMTCT and early infant diagnosis services. While further research is required to deeply analyze and understand influential factors and barriers for not utilizing and adhering to PMTCT services, more innovative ways are needed to optimize early identification and treatment of HIV infected children.

**Keywords:** PMTCT, PITC, POC-EID

## THPEC126

### **Expérience Communautaire de la Fédération des Associations des Femmes Unies dans la Prévention de la Transmission Mère-enfant du VIH(PTME) au Centre de Traitement Ambulatoire de Talangai au Congo**

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**Contexte:** Créée en 2010, la fédération des associations des femmes unies dans la lutte contre le VIH/SIDA (FAFULSI) soutient et sensibilise les femmes séropositives sur la prévention des nouvelles infections, à la lutte contre les droits des femmes VIH+, réalise les séances d'éducation thérapeutique (ETP) et aide les femmes au partage de leur statut VIH+ aux conjoints. La séroprévalence nationale des femmes enceintes au Congo étant de 3,6% en 2017, on a noté l'inaccessibilité de celles-ci aux services de santé sexuelle et de la reproduction à cause de la stigmatisation et discrimination dont elles font l'objet.

**Méthodes:** Il s'agit d'un travail rétrospectif qui a concerné toute l'année 2018. A cet effet, nous avons sensibilisé les jeunes filles, garçons VIH+ en âge de procréer et leurs conjoints dans les quartiers et en milieu de soins sur l'utilisation des méthodes contraceptives pour éviter les grossesses non désirées et à lutter contre la stigmatisation et la discrimination dans le but d'atteindre les objectifs 90-90-90. Nous avons sensibilisé les différents membres d'associations de la fédération dans leurs sièges respectifs. Le counseling pré et post test, le counseling d'allaitement, l'ETP, les groupes de parole, les visites à domicile, les témoignages à visage découvert ont été réalisés pour atteindre nos objectifs.

L'encouragement au partage du statut sérologique aux conjoints en vue de leur dépistage et ceux d'autres membres de la fratrie a été fait. La sensibilisation à la loi N°30-2011, portant lutte contre le VIH et protection des droits des PVVIH a été faite pour lutter contre la stigmatisation et la discrimination. La stratégie porte à porte a été utilisée pour dépister les nouvelles infections.

**Résultats:** Les 132 gestantes VIH+ référées au CTA de Talangai de 17 à 35 ans ont été sensibilisées et bénéficié des séances d'ETP et mis sous traitement ARV ; 84 nouveau-nés ont bénéficié d'une PCR dont 2 se sont avérés positives pour cause d'allaitement mixte ; 98 parmi elles ont partagé leur statut aux conjoints dont 81 ont été dépistés et deux avérés positifs. Sur 604 jeunes couples sensibilisés dans cet arrondissement (Talangai), 576 étaient dépistés dont 6 filles et 2 garçons déclarés séropositifs.

**Conclusions et Recommandations:** La sensibilisation par les paires éducatrices ont suscité la confiance qui a permis la réduction du taux de de l'infection à VIH, d'atteindre un grand nombre des couples en âge de procréer et de favoriser le dépistage.

## THPEC127

### **Prévention de la Transmission Mère-enfant chez les Filles sous Antirétroviraux depuis l'Enfance: Approches des Sites Pédiatriques dans les Pays à Ressources Limitées**

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**Contexte:** la PTME est un défi très important à relever dans les pays à ressources limités où les taux de couverture nationale en PTME sont encore trop bas. La PTME chez les jeunes femmes infectées par le VIH suivies depuis leur enfance reste un véritable levier pour l'élimination de la transmission du VIH de la mère à l'enfant à travers les générations. Nous décrivons ici une approche innovante de suivi de la PTME chez les jeunes femmes sous HAART depuis leur enfance.

**Méthode:** De 2003 à 2018, une cohorte d'enfants sous traitement ARV a été suivie à l'UPEIV (centre d'excellence), Hôpital d'Instruction des Armées de Cotonou. Dès l'adolescence, un paquet minimum d'interventions bien défini est mis en œuvre pour la PTME chez les jeunes mamans sous traitement ARV depuis leur enfance. Les principales interventions sont : l'annonce du statut au plus tard à 15 ans (entre 12 et 15ans), suivi biologique systématique (CV et CD4), éducation à la vie parentale, suivi scolaire et universitaire, formation d'insertion socio-professionnelle pour les déscolarisés, soutien psycho social, activités génératrices de revenus, contact pédiatrique prénatal en cours de grossesse, gestion intégrée de la période périnatale.

**Résultat:** Sur un total de 530 enfants mis sous HAART, il y a 115 adolescents et jeunes dont 67 filles. Age médian des filles 16 ans (12 à 26). 55 sous 1<sup>ère</sup> ligne (AZT/3TC/EFV, TDF/AZ/EFV ou AZT/3TC/LP-R) et 15 sous 2<sup>ème</sup> ligne (ABC/3TC/LP-R). 12 ont un niveau universitaire et 23 un diplôme professionnel. Parmi elles, 49 sont encore vierges; 21 sont en amitié avec tous les partenaires informés de leur statut et testés négatifs au VIH. Au total, 13(19,4%) des adolescentes et jeunes ont eu au moins une grossesse. Toutes ont une CV indétectable et ont bénéficié d'au moins trois contacts pédiatriques prénatals. Il y a eu 11 accouchements (7 filles et 5 garçons). Tous les enfants ont reçu la NVP pendant 6 semaines et l'allaitement maternel exclusif jusqu'à 6mois avec PCR1 et sérologie à 18 mois négatives pour tous les 11 testés. Trois sont à la deuxième grossesse.

**Conclusion:** L'élimination de la transmission verticale du VIH à travers les générations est possible grâce à un paquet minimum d'interventions centrées sur le patient et prenant en compte les déterminants socio-économiques. La mise à échelle de cette approche innovante est la clé pour l'eTME dans les pays à ressources limitées.



## THPEC128

### Effectiveness of the Prevention of HIV Mother-to-Child Transmission (PMTCT) Program via Early Infant Diagnosis (EID) Data in Senegal

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**Background:** To improve the care and treatment of HIV-exposed children, early infant diagnosis (EID) using dried blood spot (DBS) sampling has been performed in Senegal since 2007, making molecular diagnosis accessible for patients living in decentralized settings. This study aimed to determine the evolution of the HIV transmission rate in children from 2008 to 2015 and to analyze associated factors.

**Methods:** The data were analyzed using EID reports from the reference laboratory. Information related to sociodemographic characteristics, HIV profiles, the mother's treatment status, the child's prophylaxis status, and the feeding mode was included. Descriptive statistics were calculated, and bivariate and multivariate logistic regression analyses were performed.

**Results:** During the study period, a total of 5418 samples (5020 DBS and 398 buffy coat) from 168 primary prevention of HIV mother-to-child transmission (PMTCT) intervention sites in Senegal were tested. The samples were collected from 4443 children with a median age of 8 weeks (1-140 weeks) and a sex ratio (M/F) of 1.1 (2309/2095). One-third (35.2%; N = 1564) of the children were tested before 6 weeks of age. Twenty percent (N = 885) underwent molecular diagnostic testing more than once. An increased number of mothers receiving treatment (57.4%; N = 2550) and children receiving prophylaxis (52.1%; N = 2315) for protection against HIV infection during breastfeeding was found over the study period. The transmission rate decreased from 14.8% (95% confidence interval (CI): 11.4-18.3) in 2008 to 4.1% (95% CI: 2.5-7.5) in 2015 ( $p < 0.001$ ). The multivariate logistic regression analysis revealed that independent predictors of HIV mother-to-child transmission included lack of mother's treatment (adjusted odd ratio (aOR) = 3.8, 95% CI: 1.9-7.7;  $p < 0.001$ ), lack of child's prophylaxis (aOR = 7.8, 95% CI: 1.7-35.7;  $p = 0.009$ ), infant age at diagnosis (aOR = 2.2, 95% CI: 1.1-4.3 for  $\leq 6$  weeks versus 12-24 weeks;  $p = 0.025$ ) and protective effect of breastfeeding on ART against formula feeding (aOR = 0.4, 95% CI: 0.2, 0.7;  $p = 0.005$ ).

**Conclusions and Recommendations:** This study demonstrates the effectiveness of PMTCT interventions in Senegal but indicates also that increased efforts should be continued to reduce the MTCT rate to less than 2%.

**Keywords:** HIV, early infant diagnosis, PMTCT, Senegal

## THPEC129

### The Integration of PMTCT/RMNCAH+N Service: Knowledge Assessment of Healthcare Workers in Kaduna, Northwestern Nigeria

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**Issues:** The need to scale up the prevention of mother to child transmission of HIV/AIDS (PMTCT) intervention programmes in Nigeria and indeed, low resource settings, prompted the prioritization of expanding the delivery of PMTCT through greater integration with Reproductive, Maternal New-born, Child and Adolescent and Nutrition (RMNCAH+N) services. Nigeria's performance on indices related to maternal mortality and infant mortality rates are generally very poor and among the lowest in the world. Additionally, Nigeria currently has the highest rate of new-born infection with HIV in the world.

**Descriptions:** To integrate PMTCT & RMNCAH+N services, the National Agency for the Control of AIDS (NACA) in collaboration with the Federal Ministry of Health and National Primary Health Care Development Agency developed a Standard Operational Plan (SOP) and Job Aids. Part of the process was to build the capacity of healthcare workers in respective service delivery points. NACA conducted training of Healthcare workers in 3 states in the country. One of these states was Kaduna and was done in 3 Local Government Areas (LGA) covering 3 senatorial zones. 90 participants were selected for the training on integrated PMTCT/RMNCAH+N service. Prior to this training, participants were assessed based on their knowledge of the PMTCT & RMNCAH+N service using pre-test forms. The test scores ranged from 5 to 95%. The scores were classified into 3 categories; Pass (50 & >), fair (41-49) and fail (40 & <).

#### Lessons learned:

1. In total, 90 healthcare workers were tested prior to the training, 76.7% female and 23.3% male participated. The test was passed by 91.1% while 3.3% had fair score and 5.6% failed.
2. Randomly selected pre-test forms were analyzed and it was observed that 83.3% of participants failed a particular question (related to 4 elements of PMTCT).
3. The output of the pre-test guided training syllables and areas of focus during the training. The integration of PMTCT/RMNCAH+N services in healthcare settings would increase access to the quality, and ultimately improve the outcome of maternal and child health indices.

#### Next steps:

1. The integration of PMTCT/RMNCAH+N services should be implemented at the selected facilities following training, the SOP and Job Aids should be disseminated.
2. Supportive supervision should be conducted for sustained implementation of the integration approach.

**Keywords:** assessment, Healthcare, integration, Knowledge, PMTCT/RMNCAH+N

## THPEC130

### **La Stratégie « Ndèye-Dické » ou Marrainage des Femmes Enceintes Séropositives par les Sages Femmes pour Améliorer la Rétention du Couple Mère Enfant pour l'eTME au Sénégal**

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**Questions:** Faire l'Etat des lieux sur la nouvelle stratégie « Ndeye-Dicke » et dégager les perspectives.

**Description:** C'est la mise en œuvre entre Aout 2018 et Février 2019 d'un partenariat entre le CNLS, la DLSI avec l'association nationale des sages-femmes pour le paquet de services suivant : promotion de l'utilisation CPN, dépistage des femmes enceintes en salle CPN, suivi global clinique et psycho-social du couple mère enfant, avec relance des irrégulières (au moins une femme enceinte par an)..

**Leçons apprises:** Globalement, 80% des sages femmes du Sénégal ont été formées sur la stratégie « Ndèye-dické » avec un engagement accru pour la promotion de la PTME. C'est ainsi que pendant l'année 2018 les résultats préliminaires suivants ont été obtenus : 44,5% des femmes perdues de vue ont été retrouvées, 64% des PCR et 65% des sérologies ont été rattrapées. La délégation de tâches aux SFE comporte désormais en plus du dépistage, l'initiation du traitement antiretroviral, le suivi clinique et psychosocial. De même, la prise en charge des femmes enceintes séropositives est intégrée aux services de la santé de la reproduction.

**Prochaines étapes:** La mise à l'échelle de la stratégie « Ndèye-Dicke » pourrait contribuer de manière significative à l'atteinte des objectifs de l'eTME d'ici fin 2020.

## THPEC131

### **Prevention of Mother to Child Transmission (PMTCT) Outcomes among HIV Positive Pregnant Adolescent Girls and Young Women (AGYW) in Selected Health Facilities of Murang'a County, Kenya**

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**Background:** Prevention of mother to child transmission of HIV (PMTCT) services are critical components of antenatal care (ANC) for HIV+ mothers, that is, providing HIV-specific care including antiretroviral therapy (ART), safe facility-based delivery, and prompt infant enrollment in Early Infant Diagnosis (EID) services post-delivery. Despite high ART coverage among pregnant women, the risk of mother-to-child transmission of HIV (MTCT) remains high in Murang'a.

Pregnant and post-partum AGYW's living with HIV in Murang'a County experience poor outcomes along the PMTCT cascade. This cascade includes antenatal HIV testing, uptake of maternal antiretroviral therapy (ART), infant antiretroviral prophylaxis and early infant diagnosis. We were interested in quantifying the MTCT risk among AGYW.

**Methods:** Retrospective cross-sectional study using review of records of routinely collected program data between 2016 and 2019. Data was extracted from the Kenya Health Information System (KHIS), Therapy Edge and EID reports from the reference laboratory. We then used MS Excel 2013 and Tableau to analyze and compare PMTCT service outcomes of HIV+ AGYW.

**Results:** 53 pregnant AGYW of mean age 22 years tested HIV positive during the review period (Jan 2016 to June 2017). 10(19%) were known HIV positives at antenatal clinic (ANC), 36(70%) tested positive at ANC, 4(7.5%) tested positive at labour and delivery and 3(5.6) tested positive postnatally 7(13.2%) mothers did not attend ANC. All mothers were put on maternal HAART and 51(96%) infants issued with infant prophylaxis. At 24 months of follow-up, 10(18%) of 53 were lost to follow-up, 2(3.7%) were transfer out to other facilities and 1(1.8%) dead. of the 40(75%) who remained, 5(12.5%) infants were infected with HIV, prompt HIV testing of the infants through DNA PCR at 6 weeks as recommended in HIV testing guidelines was done to only 39(74%) infants.

**Conclusions and Recommendations:** Utilization of PMTCT services by AGYW was suboptimal. We found that adolescent girls and young women were more likely to miss parts of the PMTCT cascade hence the poorer eMTCT outcomes. Targeted interventions are needed to improve utilization and retention of this vulnerable population in the PMTCT cascade. Special consideration should be given to AGYW in the design of EMTCT programs. Further research is needed to improve understanding of the vulnerabilities and barriers experienced by HIV- Positive AGYW especially the adolescent pregnant women.

## THPEC132

### **Introducing Pre-exposure Prophylaxis into Antenatal Care Services for Prevention of Mother-to-Child Transmission of HIV: Experience from Eight Districts in Northern Namibia**

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**Issues:** Namibia's mother-to-child HIV transmission rate in 2016 was 2.5% and 270 exposed infants were infected that year. Some were born to mothers who seroconverted during late pregnancy or breastfeeding. The 2016 Namibia Antiretroviral Therapy guidelines recommend oral pre-exposure prophylaxis (PrEP) as part of the HIV combination prevention package. Since the guidelines' launch, PrEP uptake in antenatal care services (ANC) has been slow despite its potential to prevent HIV infection in high-risk pregnant women.

**Descriptions:** The USAID HIV Clinical Services Technical Assistance Project (UTAP), implemented by IntraHealth International in 8 districts in northern Namibia, supports HIV prevention services in public health facilities. Between January 2018-September 2018, 1129 HIV exposed baby-mother pairs registered; 68 children were infected with HIV in UTAP-supported districts, among them 11 (16%) from mothers who seroconverted during breastfeeding. In October 2018, UTAP began orienting and mentoring ANC nurses on screening pregnant women for HIV risk, PrEP eligibility, PrEP initiation, clinical monitoring, and reporting tools. UTAP advised lay counselors who provide HIV testing services to ANC clients to include PrEP information in post-test counseling. During mentoring UTAP worked with nurses to add PrEP to health education talks given to ANC clients.

**Lessons learned:** From October 2018-March 2019, 15 health facilities (11 primary care, 4 hospitals) began providing PrEP services in ANC and 105 clients started on PrEP. The 20-24 and 30-34 age groups had the highest number initiated with 24 clients each. Implementation challenges included clients reporting stigma from being seen with an antiretroviral medicine container; skepticism about effectiveness of PrEP by health workers and clients; and difficulty harmonizing PrEP and ANC follow-up appointments. Many health workers were initially reluctant to start providing PrEP; however, with ongoing mentorship they eventually appreciated the benefits and started offering it to clients.

**Next steps:** Uptake of PrEP in HIV-negative women during pregnancy, postnatal, and breastfeeding periods can avert paediatric HIV infections and needs to be expanded urgently. The Ministry of Health and Social Services is revising the National ART guidelines, including emphasizing PrEP in EMTCT. UTAP will continue to build capacity of health workers in other facilities and streamline reporting of the PrEP cascade.

## THPEC133

### Transmission du VIH de la Mère à l'Enfant au Sénégal: Prévalence et Facteurs Associés

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**Questions:** L'objectif était de déterminer le taux de transmission verticale du VIH et d'en évaluer les facteurs associés

**Leçons apprises:** L'élimination de la transmission du VIH de la mère à l'enfant devrait passer par le traitement précoce des femmes enceintes séropositives avant la conception associée à la prise en charge précoce associée à une chimioprophylaxie adaptée chez les enfants nés de mère séropositives.

descriptif: Enquête exhaustive à partir de dossiers d'enfants nés de mère séropositive entre le 1er janvier 2015 et le 31 décembre 2016 dans l'ensemble des sites PTME répertoriés au plan national. Les facteurs associés à la transmission ont été évalués à l'aide d'une régression logistique multivariable, avec le logiciel Stata 15.

**Resultats:** Sur un total 1615 enfants nés de mère séropositive, 1189 avaient un statut final documenté et ont été inclus. Le sexe a été précisé dans 1142 cas, dont 609 de sexe féminin, soit un sex-ratio de 0,87. Les mères étaient infectées par le VIH-1 dans 85.2% des cas, sous traitement antirétroviral avant la conception dans 548 cas (46,1%). La transmission a été documentée dans 52 cas, soit une prévalence de 4,4%. En analyse multivariée, les facteurs associés à la transmission verticale ont été: le poids de naissance inférieur à 2600 g (OR= 3.5 [1.1, 10.8]) ; l'absence de prophylaxie antirétrovirale chez l'enfant (OR= 3.5 [1.3, 9.4]) ; l'absence de prise d'antirétroviraux par la mère avant la grossesse (OR= 3.5 [1.4, 8.3]) ; et l'allaitement mixte (OR= 4.4 [1, 19.2]).

## THPEC134

### **Improved Early Infant Diagnosis (EID): Rapid Solutions and Lessons from Eastern Uganda**

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**Background:** The Uganda Population-Based HIV Impact Assessment 2017 estimated the prevalence of HIV among children aged 0-14 at 0.5% which corresponded to approximately 96,000 children living with HIV. Early infant diagnosis services were scaled up from 1,959 health facilities in 2015/16 to 2052 health facilities in 2016/17, while positivity among infants reduced to 3.1%. Despite this progress, the eastern region of Uganda was marked as a lagging region with an EID positivity of 7.4% by June 2017. From April 2018 to March 2019 USAID-funded Regional Health Integration to Enhance Services in Eastern Uganda (RHITES-E), led by IntraHealth International, developed and implemented a four pronged approach to prevention of mother to child transmission of HIV (PMTCT) to improve: ART coverage, retention of mother-baby pairs EID coverage, viral load suppression, and reduction of EID positivity to less than 12 months of infants age.

**Methods:** RHITES-E employed innovative strategies for reducing EID positivity in eastern Uganda namely: strengthening mother-baby care points at one stop centers for maternal and child health services, facility-based trainings for health workers on the consolidated PMTCT/EID guidelines, integration of EID in immunization clinics, monthly coaching and mentorships of midwives on EID, roll out of digital application in high volume facilities where midwives pre-booked mothers for infant testing at 6 weeks of age and birth cohorting and retention monitoring of infants. Index client testing approach was also used to identify infants whose mothers tested positive. Data were tracked using DHIS2 and CPHL dashboards.

**Results:** Trends of EID positivity in the region showed a decline in EID positivity from 7.4% (0-12 months) to 3% (0-12 months). EID positivity among infants (0-2 months) also declined from 4.9% to 1.7% achieving the national benchmark of less than 5% EID positivity. Mentor mothers removed dry blood spot samples and EID coverage increased from 40% to 68% by March 2019.

**Conclusions and Recommendations:** Targeted PMTCT EID mentorships on EID/immunization integration and pre-registration of infants for infant testing greatly improved EID coverage and enabled timely tracking of mother-baby pairs. Index client testing at facility and community level was a key approach to identifying HIV positive infants at community level whose mothers had never accessed PMTCT services. These interventions are effective and should be scaled up by similar programs.

## THPEC135

### Improving Timely Uptake of Early Infant Diagnosis to Reduce HIV Positivity among HIV-exposed Infants in Kapchorwa Hospital, Uganda

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**Background:** Globally, approximately 90% of HIV-positive children get the virus from their mothers during pregnancy, delivery, and breast feeding. In Uganda, vertical HIV transmission accounts for 18% of new infections. This shift in transmission dynamics has raised issues concerning optimal testing, identification, and treatment of HIV-exposed infants. From July-September 2017, only 26% of exposed infants enrolled in mother-baby care at Kapchorwa Hospital, Uganda, were able to access timely HIV testing services. This delayed uptake of early infant diagnosis (EID) greatly contributed to the high positivity rate among these infants, thus hampering efforts to achieve the Super-Fast-Track targets for pediatric HIV. The USAID-funded Regional Health Integration to Enhance Services in Eastern Uganda (RHITES-E) activity, led by IntraHealth International, worked with Uganda's Ministry of Health and hospital staff to improve this picture using continuous quality improvement (CQI) approaches.

**Methods:** A CQI team set up a series of interventions to increase the percentage of HIV-exposed infants accessing timely EID services. An analysis identified long waiting times at service delivery points and stigma against mothers living with HIV as root causes of delayed uptake. The CQI team decided to integrate immunization, postnatal care, and dry blood sample collection for HIV testing so that they are provided at one single service point. A specific lab staff was designated to receive and serve all postnatal HIV-positive mothers as priority on clinic days. The mother's ART refill appointment days were synchronized with baby's immunization appointments to allow peer mothers and expert clients to give sensitization talks. Monitoring data from DHIS2 and the EID register were used to track changes from September 2017-December 2018.

**Results:** The observed number of exposed infants accessing timely EID services increased from 26% in July 2017 to 87.5% by December 2018. Similarly, the rising positivity rate (16.7%) observed in July 2017 was reduced to 0 by December 2018.

**Conclusions and Recommendations:** Use of CQI principles was key in improving timely uptake of EID services, which in turn reduced HIV seroconversion among HIV-exposed infants. Reduction in waiting time to access different services by mothers and their children greatly motivated them to utilize most of the essential services including timely access to EID services.



## THPEC136

### **Assessment of Infant Feeding Options and It's Determinants among HIV Positive Mothers Accessing PMTCT Services in Public and Private Health Facilities in Enugu State, Nigeria**

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*Chukwuemeka Odumegwu Ojukwu University, Awka, Nigeria*

**Background:** Vertical transmission of HIV from an infected mother to her child during pregnancy, labour, delivery or breastfeeding remains an important public health issue in Sub-Saharan Africa. Almost 70% of the global total new HIV infections occur in sub-Saharan Africa with Nigeria having the 2nd largest burden globally. Infant feeding is crucial in the first year of life and a key determinant of child survival and development. The study aimed to ascertain the infant feeding options and it's determinants among HIV positive mothers accessing PMTCT services in public and private health facilities in Enugu State, Nigeria

**Methods:** This comparative, cross-sectional hospital based study was conducted from February to September, 2017 among randomly selected HIV-positive mothers accessing PMTCT services in public and private health facilities across the three senatorial districts of Enugu State, Nigeria. Multi-stage sampling technique was used to select 328 eligible participants. A pre-tested structured interviewer-administered questionnaire was used to collect data on socio-demographics, obstetric history and feeding practices. Data obtained was analyzed using SPSS version 23. Bivariate and multivariate logistic regression analyses were used to assess association between the various feeding options and the predictor variables.

**Results:** The mean age of the respondents from the private and public health facilities was  $27.4 \pm 5.10$  and  $29.16 \pm 5.63$  respectively. Participants from private health facilities were 2 times more knowledgeable about infant feeding options compared to their counterparts from the public health facilities. (OR = 2.2, CI = 1.430-3.486,  $p < 0.001$ ). Positive attitude towards infant feeding was shown by participants from public health facilities compared to their counterparts from Private health facilities. The practice of Exclusive Replacement Feeding, Exclusive Breast-Feeding and Mixed Feeding were 53.7%, 35.9% and 10.4% in the private health facilities compared to 57.2%, 29.7% and 13.1% in the public health facilities. Education status of the mother, mode of delivery, fear of HIV transmission were significantly associated with ERF method while cost effectiveness, stigma and fear of discrimination were significantly associated with EBF practice after adjustment for confounders.

**Conclusions and Recommendations:** Continuing advocacy on the options of feeding is needed to change the attitude of HIV- positive mothers to explore the various feasible and sustainable options

## THPEC137

### **The Impact of a Community Led Initiative to Contribute to the Prevention of HIV Transmission from Parent to Child in Luwerezhi, Mzimba District of Malawi**

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**Background:** Between 2015-2017, Help a Child Malawi and Livingstonia Synod AIDS Programme have implemented a project called: "*Community Initiative for an HIV Free Generation in Luwerezhi in Mzimba district of Malawi*". The project aimed at reducing mother to child transmission of HIV by 50% by providing a comprehensive and integrated PPTCT. A study was conducted at the end of the project to determine the impact it has had on the core beneficiaries (women of childbearing age (15-49 years) and children, and how these changes would be sustained. The evaluation was also meant to capture good practices and the main lessons learned in the implementation of the project.

**Methods:** The study used a mix of quantitative and qualitative methods of data collection and analyses. The project's baseline data was used for comparative assessment and the evaluation of the project's progress. This informed the development of tools used in data collection. A structured questionnaire was administered to randomly select 378 men and women aged 15-49 years. 18 gender mixed and separate focus group discussions were conducted in groups of 8 to 12 participants. In-depth Interviews were conducted with those involved directly and indirectly in the project's activities. Data entry and analyses were done using Statistical Package for Social Scientist.

**Results:** 43 on 44 babies born from HIV positive mothers tested negative at 6 weeks of being born. From the 2,206 pregnant women-1,912 fathers=86% have joined in one of the ANC visits compared to 203=20% of 996 at the start. 92% of pregnant women attending at least four ANC visits increasing from 45%. 100% of HIV positive women were put on ARVs by 2017 as compared to 51% in 2015. Comprehensive knowledge of HIV prevention among men and women increased from 41.1% to 58.9% and from 39.9% to 60.1% respectively. HCT uptake went up among men=52% to 95%, women=73% to 95%. Disclosure was highest=93.8%. An increase in families=66% using Family Planning Methods as compared to 31%.

**Conclusions and Recommendations:** Though there was an improvement in community PPTCT, comprehensive knowledge on HIV among women and men leading to an increased in HCT uptake and families using Family Planning Methods, there is a need to build and further strengthen the capacity of the communities to mobilize resources and carry out some of the activities for sustainability. The use of the local structures to access funds from the Local Development Fund should be enhanced.

## **THPEC138**

### **Effectiveness of Community Case Finders and Community Testers in Promoting Access to Pediatric HIV Services in Zimbabwe through Door to Door Testing**

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**Issues:** Globally 1.8 million children under the age of 15 years are living with HIV (UNAIDS 2016). In the absence of antiretroviral therapy (ART), 50% of children living with HIV die before their second birthday. Pediatric ART services are available in 95% of the health facilities. However, coverage is not uniform across all the Districts and Provinces in Zimbabwe with some still under 80%.

**Descriptions:** SAfAIDS through financial support from PATA and Aidsfonds is implementing the FTT4000 through working with Community Case Finders (CCFs) and Community Testers (CTs) who are responsible for finding, testing and linking into care and treatment HIV exposed children through a household case management approach. The objectives of the sentinel site surveillance were to:

1. Assess the impact made by CCFs and CTs in ensuring that children receive HIV testing services.
2. Generate knowledge on how the programme model is being received by service providers.
3. Develop recommendations on what needs to improve for the model to be more efficient and effective.

#### **Lessons learned:**

##### **Objective 1**

All respondents reported that they appreciated the role that is being played by the CCFs and CTs in finding HIV exposed children and providing testing services. During the FGDs one of the participants reported: "*testing of children in the home has never happened in this community, it is really a good initiative*". This indicated the initiative was unique and is closing an existing health service delivery gap.

##### **Objective 2**

During the FGDs one of the nurses pointed out that: "*CCFs from the FTT4000 programme are very instrumental in tracing mother baby pairs who would have been lost to follow and the CTs complement our efforts through providing HIV testing services to children within the community*". This demonstrated complementarity of Ministry of Health and Child Care (MoHCC) initiatives in PMTCT by FTT 4000 CCFs and CTs.

##### **Objective 3**

The respondents indicated that there was need for the CTs to be provided with motor bikes for greater mobility purposes and increase their coverage and reach over long distances. It was recommended that more CCFs and CTs should be recruited across all the Districts so that more households a

**Next steps:** In summation, the study gathered information about how the programme is contributing to the MoHCC agenda of eliminating parent to child transmission of HIV. This working model can be replicated to other Districts or Countries.

## THPEC139

### **Factors Associated with Loss to Follow-up (LTFUP) of HIV-exposed Infants (HEI) in Early Infant Diagnosis (EID) Program in Phalombe District, Malawi**

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**Background:** Despite the introduction of Option B+ in PMTCT programme in Malawi, the efforts have been impeded with losses to follow up of HIV exposed infants in care. In 2016, Mother to Child Transmission (MTCT) rate at 24 months was at 10% against a national target of 5%, this was attributed to the loss to LTFUP of HEI in EID programme. In Phalombe district, despite the declined in LTFUP of HEI from 44% to 39% between 2012 to 2015. The drop was sub-optimal and above the national target of 5%. Most studies conducted in area of PMTCT have focused on LTFUP of the HIV positive mothers from Antenatal to postnatal with limited attention on infants who are lost to follow up despite their mothers being compliant to the PMTCT programme. In 2014 and 2015, PMTCT mothers who defaulted were 15% and 18% respectively while exposed infants who defaulted were 53% and 39% respectively. Given the relevance of adhering to EID this study was conceptualized to explore factors influencing LTFUP of HEI in EID programme whose mothers are retained in care up to 24 months.

**Methods:** This was a descriptive cross-sectional study design which utilized qualitative methods. The study was conducted in Phalombe district because of its high default rate of an average of 51% for 4 consecutive years. The study included HIV positive mothers who had the exposed infant enrolled in follow-up programme. Data was collected using a semi-structured guide and in-depth interviews. A unique identification number was assigned to each recorded interview. Thematic data analysis using a step-by-step guide, was used in this study.

**Results:** Participants highlighted the following challenges: Delay in starting the clinic, Poor attitude of health workers, Lack of privacy, Restriction by husband, Unofficial transfer, Lack of community and family support, Poverty, Fear of loss of marriage, Fear of stigma and discrimination, Lack of male involvement, Lack of transport, Problems to follow-up across borders and Lack of Disclosure

**Conclusions:** Efforts aimed at increasing retention of exposed infants in the EID follow up programme should strive to lift the socioeconomic status of the PMTCT mothers and overcome any other constraints that can prevent the HEI from coming with the exposed infant to follow-up visits for a period of two years

**Recommendations:** Malawi government should consider formulating policies that aim at mitigating problems affecting retention of HIE in EID programme like Community PMTCT.

## THPEC140

### The 'Path to Elimination' of Mother to Child Transmission of HIV and Syphilis in High Burden Countries: What Does It Take?

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**Issues:** Globally, in 2018, an estimated 170,000 new infant HIV infections occurred, mostly in sub-Saharan Africa, and there were an estimated 660 cases and 350,000 adverse birth outcomes from congenital syphilis (CS) in 2016. With the global shift to lifelong maternal ART, and improved supply of benzathine penicillin, elimination of new HIV and CS infections in infants, while assuring health of mothers, is possible. In very high burden HIV (seroprevalence >2%) and maternal syphilis (seroprevalence >1%) countries, achieving the WHO defined case rate of elimination of mother-to-child transmission (EMTCT) of HIV and syphilis ( $\leq 50$  per 100,000 live births) remains out of reach.

**Descriptions:** To address this, WHO set criteria for recognition of high burden countries that have made significant progress in reducing mother to child transmission rates while maintaining high coverage of first antenatal visit, maternal HIV and syphilis testing and treatment. The Path to Elimination (PTE) has motivated these countries to gain and maintain momentum and undertake activities such as constitution of national EMTCT validation committees, meaningful civil society participation, use of the EMTCT pre-assessment tool, development of EMTCT roadmaps and intensified interventions such as use of dual rapid HIV and syphilis tests. Despite progress, no high burden country has yet been recognized as being on the PTE.

**Lessons learned:** Botswana, Eswatini, Namibia, Uganda and Zimbabwe are in varied preparatory stages for certification on PTE. Following advocacy and capacity building, lessons have been identified to guide countries towards achieving criteria to attain gold, silver, and bronze tiers of PTE. Country experience shows meaningful involvement of civil society in early stages, strategies for improving data management and laboratory performance and HIV/STI/Reproductive, Maternal, Neonatal, Child and Adolescent Health program strengthening are required for achieving targets. The countries now have significant civil society representation on committees, have identified data management gaps, improved syphilis programming and laboratory management.

**Next steps:** Countries will continue to use UNAIDS Spectrum estimates and the WHO CS estimation tool to triangulate with national data for PTE certification. Experience demonstrates that pairing assessments with advocacy and capacity building ensures intervention implementation in a manner consistent with human rights standards

## THPEC141

### Socio-demographic Profile of Naive HIV Pregnant Women and Retention to the PMTCT Interventions in Eastern Cameroon

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**Background:** HIV/AIDS is more and more becoming a threat to the lives of women and infants. At enrolment, socio-demographic data of HIV- seropositive pregnant and lactating women are collected with little or no analysis done on them. This study was aimed at profiling HAART- naïve HIV-infected pregnant women in the East region of Cameroon so as to optimize the implementation of PMTCT interventions

**Methods:** Naive HIV positive pregnant women were consented and with the aid of two structured questionnaires at recruitment and follow-up, socio-demographic, treatment compliance and observance data were obtained. All data were keyed into MS Excel sheets and analyzed using EPI INFO V 7.2.2.6.

**Results:** A total of 69 women were enrolled with an age range of 15 - 40 years and a mean age of 26 years. Most of these women were married (51, 73.91%) being either Christians 69.57% (48) or Muslims 30.43% (21). 49.28% (34) were housewives, 15.94% (11) students amid other professions. Slightly above half had secondary and above education (37, 53.63%) as against 32 (46.37%) who did not attend secondary education nor a formal education. These characteristics are among the factors that can influence maternal and child health.

At first follow-up, 73.33% (22/30) declared not knowing their partners' HIV status; 66.66% (20/30) said they were sexually active without condom, 13.33% (4/30) were active with condom while 20% (6/30) were inactive sexually after knowing their HIV status.

At the second, 08 deliveries were noted, 06 lost to follow-up, 01 displaced, 01 dead and 14 (46.67%) retained.

Summarily, 13 (18.84%) women were lost to follow-up; (92.3%, 12/13) had below secondary or no formal education and mostly housewives (92.3%, 12/13). The two women who were excluded, due to non - observance to treatment, also had below secondary or no formal education.

**Conclusion:** To reach the right people with PMTCT interventions, in the right place and at the right time, we need to go to context. In a resource limited setting to reduce cases of lost to follow-up and improve on care-seeking attitude, comprehension, treatment compliance and observance, retention to care, pregnancy outcomes and maternal and child health, PMTCT interventions should be contextualized including maternal culture, dialect, level of education, lifestyle, and autonomy.

**Keywords:** Profile, Pregnant women, HIV, Intervention, PMTCT

## THPEC142

### **Optimizing Prevention of Mother-to-Child Transmission of HIV through Multi-skilled Community Health Workers (MCHW) in the Far North (FN), North (NO), Adamawa (AD) and East (ES) Regions of Cameroon**

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**Issues:** HIV seropositivity rates in pregnant women in the EN, NO, AD and ES regions stand at 1.2%, 1.9%, 3.3% and 5.5% respectively, for corresponding antiretroviral therapy (ARV) coverages of 62%, 77%, 66% and 75%, below the national rate (85%). The low use of antenatal (ANC)/Post-natal care (PNC) services and the high use of traditional birth attendants are a result of customary practices. Cognisant of this situation, the country has included in the Community-Directed Interventions Package (CDIP) implemented MCHW, the active search in the community of defaulter mother-baby pairs.

**Descriptions:** Within the framework of the fight against HIV, MCHW are mainly involved in: Households census of target populations, home visits, educational talks and case referrals in Health facilities. These activities are coordinated by task forces set up at all levels of the health pyramid. We report a 21 months experience between 2017 and 2019 (2017:12 months, 2018:3 months, 2019: 6 months) in 23/45 targeted priority health districts (FN:7/14, NO:5/10, AD:4/8, ES:7/13) covered by 1891 MCHW in 4/10 region of the country, which received additional funding for the implementation to support the implementation of activities.

**Lessons learned:** After 21 months of implementation of project activities in these regions, the findings indicate that 43% (49 778/114 738) of pregnant women who gave birth in the community and a total of 39 135 children born in the community to HIV infected mothers were referred to health facilities for care. Until the end of the year 2018, our reporting tools did not capture the total number of children born to HIV infected mothers in the community but only those born from these mothers in the community and referred to the health facility. MCHW have the potential to enhance prevention of mother-to-child transmission of HIV in our setting where the use of traditional birth attendants is high and that of ANC is low.

**Next steps:** Scaling up the integration of MCHW in the PMTCT programme to all the priority districts will greatly contribute in the reducing mother-to-child transmission of HIV.

## THPEC143

### Strategies to Eliminate Barriers to Male Involvement in Option B+ PMTCT Programs in sub-Saharan Africa

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**Background:** Globally 2.1 million children aged < 15 years live with HIV infection. About 95% of the HIV infected children have acquired the infection through vertical transmission of HIV. Almost 99% of cases have occurred in sub-Saharan Africa (SSA). Male involvement in Prevention of Mother-to-Child Transmission (PMTCT) of HIV has been considered as part of a global response to attain zero transmission. Poor male involvement in PMTCT services has been identified as one of the factors contributing to reduced effectiveness of the PMTCT programme, moreover in the era of the Option B+ strategy (lifelong antiretroviral therapy to all pregnant and breastfeeding HIV-positive women). Several studies conducted in SSA attempted to describe and explain the barriers to effective male involvement in maternal reproductive health. To improve male participation in PMTCT services, more knowledge about innovative approaches is required, learned and shared. This is a critical literature review about barriers to male involvement in PMTCT programs and successful implemented strategies to overcome them in SSA.

**Methods:** A systematic literature search (NCBI/PubMed, EMBASE, Google Scholar, etc) using a defined PICO (patient, intervention, comparison, outcome) question was conducted. Retrieved studies were evaluated for inclusion/exclusion, restricting the review to studies published between January 2013 and June 2018 and conducted "in" or "about" SSA. A Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA, evidence-based minimum set of items for reporting systematic reviews) was used.

**Results:** Out of 1712 studies identified through database searching about male involvement in PMTCT programs in SSA, 24 studies were included. Barriers common and specific to the SSA context, were summarised and grouped as "individual", "societal" and "health system" barriers. Strategies improving the outcomes of these barriers were also summarised and an explanatory model to improve male involvement in PMTCT services in SSA is proposed.

**Conclusions and recommendations:** Restructuring PMTCT programs in SSA during Option B+ era must be a priority. Addressing barriers to encourage male partners involvement is a key for improving uptake, timeliness and effectiveness of services to HIV-positive women and their infants.

**Keywords:** PMTCT, Option B+, Male involvement, Barriers, Strategies, SSA



## THPEC144

### Déterminants de la Non Réalisation du Test VIH au Cours de la Grossesse au Mali

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**Background:** La réalisation du statut VIH au cours de la grossesse est une condition nécessaire à la prévention de la transmission mère-enfant (PTME) du VIH. L'étude avait pour objectif d'évaluer les niveaux de non réalisation du test VIH au cours de la grossesse lors des deux dernières enquêtes démographiques et de santé (EDS) du Mali et d'identifier des facteurs associés.

**Methods:** Les données des quatrième et cinquième EDS du Mali réalisées respectivement en 2006 et 2012 nous ont servi de base d'analyse. Ont été considérées dans l'étude, l'ensemble des femmes ayant accouché l'année qui a précédé chaque enquête, soit 2708 en 2006 et 2241 en 2012. La non réalisation du test VIH a été définie comme étant le fait de n'avoir pas effectué le test VIH au cours de la grossesse et/ou reçu les résultats. La régression logistique binaire a permis l'identification des déterminants et les forces d'association ont été mesurées à travers les Odds ratios ajustés (ORaj) avec les intervalles de confiance (IC) à 95%.

**Results:** La proportion des femmes n'ayant pas été testées au HIV au cours de leur grossesse était de 91,5% et 84,4% respectivement en 2006 et 2012 soit une baisse de 7,1%. Résider en milieu rural (ORaj= 2,28 ; IC : 1,34 - 3,90) vs urbain, être d'un niveau économique très pauvre (ORaj= 4,13 ; IC : 1,57 - 7,05), pauvre (ORaj= 3,32 ; IC : 1,57 - 7,05) et intermédiaire (ORaj= 4,82 ; IC : 2,18 - 10,64) par rapport au niveau très riche ; ainsi que l'absence de connaissances (ORaj= 5,57 ; IC : 2,62 - 11,82) et le niveau moyen de connaissances sur le VIH/sida (ORaj= 2,54 ; IC : 1,67 - 3,86) étaient les déterminants de la non réalisation du test VIH au cours de la grossesse en 2006. Ces mêmes facteurs ont été identifiés en 2012 en plus de la non exposition aux médias (ORaj= 1,83 ; IC : 1,16 - 2,90) et l'absence de connaissances sur les mesures de PTME (ORaj= 1,84 ; IC : 1,20- 2,83).

**Conclusions and recommendations:** La non réalisation du test VIH au cours de la grossesse reste élevée au Mali, malgré une baisse constatée. Elle constitue un frein à l'élimination de la TME du VIH. Il est important de multiplier les stratégies de sensibilisation sur le VIH/sida et spécifiquement sur la PTME à l'endroit des femmes surtout rurales et des milieux défavorisés qui n'ont pas souvent accès aux médias.

## THPEC145

### Seroprevalence of HIV, Hepatitis B Virus, Hepatitis C Virus and Syphilis among Blood Donors in Hohoe Municipal Hospital, Ghana: 2015-2016

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**Background:** Unsafe blood remains a major threat to the global spread of transfusion-transmissible infections (TTIs). Blood is usually tested for four TTIs: Human Immunodeficiency Virus (HIV), Hepatitis B Virus (HBV), Hepatitis C Virus (HCV) and Syphilis before transfusion. This study determined the seroprevalence of transfusion-transmissible infections among blood donors in the Hohoe municipal hospital, Ghana from 2015 to 2016.

**Methods:** The study adopted a retrospective hospital-based cross-sectional design using secondary data obtained from the blood donors' records from January 2015 to December 2016 at the laboratory unit of the hospital. A total of 3,173 (2802 male & 371 female) blood donors were reviewed using hospital records for the presence of anti-HIV 1/2 IgG/IgM, HBV, anti-HCV IgG/IgM, and anti-Treponema pallidum IgG/IgM/IgA, using commercial ELISA kits following standard protocols. Statistical analysis was performed using Stata version 14.0 at the level 0.05.

**Results:** The sero-prevalence of HIV, HBV, HCV and Syphilis were 123 (3.9%) [108 (3.9%) males & 15 (4.0%) females]; 160 (5.0%) [140 (5.0%) males & 20 (5.4%) females]; 135 (4.2%) [119 (4.2%) males & 16 (4.3%) females] and 164 (5.2%) [157 (5.6%) males & 7 (1.9%) females] respectively. Females were 30% less likely to be infected with Syphilis than males [OR=0.3; 95% CI: (0.15-0.69); p=0.004]; Donors aged 20-29 years were 60% less likely to be infected with HIV than those less than 20 years [OR=0.6; 95% CI: (0.04-0.99); p=0.049], while those aged 30-39 years were 90% more likely to be infected with Syphilis than those less than 20 years [OR=1.9; 95% CI: (1.23-3.20) p=0.005] and those aged 40-49 years were 2 times more likely to get infected with HBV than those less than 20 years [OR=2.2; 95% CI: (1.17-4.04)]; p=0.013].

**Conclusions and Recommendations:** Males presented higher prevalence of Syphilis, and all TTIs were recorded highest among young adults. It is important to continue screening donated blood with highly sensitive and specific tests and to sensitize the public especially young adults, with more focus on females on the importance of blood donation.

## THPEC146

### Effect of Training of Barbers and Hairdressers on HIV Prevention in the Barbing and Hairdressing Salons

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**Issues:** HIV/AIDS, a public health challenge being faced in the world over has continued to be of concern to all. Nigeria's National HIV/AIDS prevalence reduced from 5.8% in 2001 to its current prevalence rate of 3.4%. Through this achievement, it is evident that there is hope for further reduction rate, therefore all hands must be on deck for this common cause. In view of this need, this research was aimed at studying the knowledge and attitude of barbers and hairdressers on the risk of HIV/AIDS contraction by the service providers and the clients in the salon. They were also sensitised and trained on various infection prevention methods through practice of safety precautions and sterilization of all equipment among others.

**Descriptions:** The LGAs in Oyo State, Nigeria was divided according to the existing 6 health zones. The researchers worked in collaboration with the Nigerian Union of Barbers and the Nigerian Union of Hairdressers, Oyo state chapter in the planning and implementation of the research work. 300 members of the union were selected by zone and they were trained as Peer Health Educators and had the responsibility of coordinating activities in their respective zones. They also had the responsibility of giving reports which assisted in the evaluation of activities on the project and its impact. Refresher/ Update trainings were also conducted for the Peer Health Educators to update their knowledge and provide information necessary for continuity and sustainability of the research project.

**Lessons learned:** The active participation and contribution of the union in the pilot initiative both at the planning and implementation stages contributed greatly to the recorded success. It has been identified that barbers and hairdressers do not pay sufficient attention to the use of protective clothing and gloves, which are highly important for skin protection and exposure prevention. The result showed increased and improved knowledge of workplace hazards and its implications and the participants were more aware of the ways to prevent HIV infection on the job than before the training intervention.

**Next steps:** Regular training, monitoring and refresher training should be conducted for all professional Barbers and Hairdressers. Premises should have disposable gloves, clean linen and gowns or aprons that are appropriate for the skin procedures carried out at the premises. HIV prevention posters should be hung conspicuously in the premises.

## THPEC147

### **Facteurs Limitant l'Implication des Partenaires Masculins en PTME: 14 Zones de Santé de la RDC dans le Cadre du Projet Optimizing HIV Treatment Access for Pregnant & Breastfeeding Initiative**

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**Introduction:** Les femmes enceintes bénéficient du dépistage pour le VIH à travers le DCIP systématique organisé lors des CPN dans le cadre de la PTME. Ce service est aussi disponible pour les hommes, mais le taux de dépistage reste plus faible chez ces derniers.

La non implication des partenaires masculins constituerait une barrière à la femme enceinte d'adhérer au test de dépistage et à la prise en charge du VIH.

**Objectif:** Identifier les facteurs qui limitent l'implication des partenaires masculins des femmes en PTME ;

**Méthodologie:** Etude transversale mixte qui s'est déroulée entre juillet et octobre 2017 dans 14 Zones de santé dont douze dans les provinces du Haut Katanga et du Nord Kivu, et deux dans la ville de Kinshasa. L'application d'un questionnaire standard fermé et le guide d'entretien semi-directif, individuel et par focus group auprès des femmes enceintes et allaitantes infectées par le VIH ou non, leurs partenaires masculins, les prestataires des soins des structures visitées et au sein de la communauté.

**Résultats:** Sur 845 participants ayant acceptés de participer à l'étude quantitative : 589 (69,7%) étaient des femmes enceintes dont 356 (60,4%) étaient infectées par le VIH et 256 (30,3%) partenaires masculins dont 138 (54%) étaient infectés par le VIH.

Pour les 356 femmes infectées par le VIH de l'étude, le premier test de dépistage du VIH avait été réalisé dans 61,8% des cas lors de la CPN dans le cadre de la PTME, dans 21,9% lors d'un épisode de maladie et dans d'autres circonstances.

Seules 52,2% des femmes dépistées positives pour le VIH avaient partagé le résultat du test avec leurs partenaires masculins.

Sur 47,5% des répondantes qui n'avaient pas partagé le résultat du test de dépistage :

- 39,7% craignaient la réaction du partenaire;
- 14,7% ne savaient pas comment informer;
- 14,1% n'étaient plus en contact avec leur partenaire;
- 7,1% avaient jugé inopportun de partager le statut sérologique;
- 24,4% avaient avancé des raisons variées (liaison non officielle, cas de viol, partenaire en voyage ou décédé, ...).

**Conclusion:** Bien que le dépistage des partenaires masculins soit vulgarisé dans le cadre de la PTME, les femmes infectées constitueraient l'une des barrières dans l'implication des hommes.

Le renforcement des capacités des femmes par le VIH seraient judicieux pour faire accepter et faire comprendre à ces dernières le bienfondé de l'implication des hommes dans la PTME.

## **THPEC148**

### **Discussion Groups on HIV/AIDS Prevention with Girls Deprived of Liberty of the Casa Foundation - Penitentiary System - of the State of São Paulo (BR)**

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In 2016 a partnership was established between the STD/AIDS Referral and Training Centre (CRT-DST/Aids, of the Health Secretariat of the State of São Paulo), the Centre for Socio-educational Assistance to Adolescents (CASA) Foundation and UNICEF with the objective to carry out integrated STD prevention actions involving the employees of the Foundation and incarcerated young women, a demographic group particularly vulnerable to due to STD/HIV/AIDS.

The activities included training sessions, discussion rounds reflecting on ways to improve approaches to the treatment of STD with an emphasis on syphilis, and access to prevention inputs (male and female condoms and HIV, syphilis, hepatitis B and C testing). A joint workshop was held bringing together the participants of the initiative with employees of the Ruth Pistori Women's Unit as well as members of the State Network of Young People Living with HIV/AIDS and representatives of the state in the Health Popular Education Movement.

The purpose of these meetings was to prepare detailed transcripts under the supervision of technicians of the STD/Aids State Program which would be made available to the incarcerated young women during the 2-weekly group meetings held to discuss STI related topics focused on prevention.

In October 2016 five discussion groups were organized with the participation of all 75 young women who were imprisoned in the detention centre at that time. The youth have made murals/posters (?) with information on combined STD prevention, which were to be posted in strategic locations and in classrooms. After the event, all the participants opted for being tested for HIV, Hepatitis B, and C and Syphilis. As a consequence of this positive impact, the Centre is continuing the two-weekly group discussions.

This experience has made it clear that continuous STD prevention activities focused on alternatives to condom-use are feasible and have shown promising first results in the detention centres run by the CASA foundation. As a consequence, prevention program for syphilis with a specific protocol for diagnosis and treatment will be elaborated in 2017 in order to be implemented in all CASA Foundation units.

## THPEC149

### Correlates of Comprehensive Knowledge about HIV Prevention among Young People in Sub-Saharan Africa; Missed Opportunities for Mobile Technology?

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**Background:** Evidence suggests that comprehensive knowledge about HIV prevention is vital in ensuring safer sexual behaviors and access to HIV care services. In resource limited settings, the media, mobile and internet services are considered as veritable tools in improving this knowledge especially among young adults who have the highest HIV incidence rates in Africa. We hypothesized that access to mobile/internet services was associated with comprehensive knowledge about HIV prevention in 43 sub-Saharan African countries.

**Methods:** This was an ecological analysis of country-level data from UNAIDS and UNICEF collected between 2011 and 2017. Using Spearman's rho, we conducted bivariate analyses correlating comprehensive knowledge about HIV prevention among people aged 15 - 24 years with literacy rates among young males and females, use of mass media, mobile phone and internet penetration, urbanization & extreme poverty rates. Comprehensive knowledge of HIV prevention was defined as the proportion of young men and women aged 15-24 years who correctly identified the two major ways of preventing sexual transmission of HIV, reject the two most common local misconceptions about HIV transmission and know that a healthy-looking person can be HIV-positive. We analyzed significant correlates using a stepwise multilinear regression and considered  $p < 0.05$  significant.

**Results:** The median proportion of young people with knowledge of HIV prevention was 30.5% (IQR: 22.9 - 43.9%). Median literacy rates for males and females were 80.5% (IQR: 63.8 - 88.7%) and 75.1% (IQR: 47.5 - 86.2%) respectively. Access to mobile phones & internet users per hundred population was 76.4% (IQR: 55.1 - 106.6%) and 15.4% (IQR: 8.1 - 25.7%). Comprehensive knowledge was significantly correlated with male literacy ( $r = 0.44$ ,  $p = 0.004$ ), female literacy ( $r = 0.53$ ,  $p < 0.001$ ), number of mobile phone users per 100 population ( $r = 0.30$ ,  $p = 0.05$ ) and number of internet users per 100 population ( $r = 0.48$ ,  $p = 0.001$ ). In multivariate analysis, only female literacy rate was statistically significant ( $\beta = 0.51$ , 95% CI: 0.13 - 0.43,  $p = 0.001$ ).

**Conclusions:** Comprehensive knowledge on HIV prevention was associated with literacy rates especially among females. However, access to mobile phone and internet services remain untapped resources that can be considered in scaling up education efforts in this population.

## THPEC150

### Factors Affecting Access and Utilization of Condom in Zanzibar, Tanzania

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**Background:** Proper and consistent condom use is one of the key strategies for controlling HIV infection in Zanzibar. However, limited access and utilization of condom hinder the implementation of condom program in Zanzibar. Considering this, Zanzibar AIDS Commission conducted condom study in order to provide information to be used for reinforcing the outcomes of condom programming. The study had the following

#### **Objectives:**

1. To determine the extent to which male and female condoms are accessible in Zanzibar.
2. To determine the barriers to obtain male or female condoms.
3. To identify the reasons which make people in Zanzibar to use or not use the condoms.
4. To understand community attitudes and perceptions towards condoms.

**Methods:** We conducted a qualitative study in both islands of Zanzibar using key informant interviews and focus group discussions. A total of 425 participants were interviewed, 214 from Unguja and 198 from Pemba. Key informant interviews were conducted with 132 community members, 22 informal workers, 63 youth out of school and 35 youth in higher level education. Key informants were recruited purposively through Zanzibar AIDS Commission contacts and community partners. Focus group discussion was conducted with 39 Key Populations, 66 fishermen and 58 People Living with HIV. FGD participants were recruited through peers. Analysis of FGDs and KIIs was done using an iterative process. Interviewers reviewed detailed notes from each KII and FGD with the survey team at the end of each day to identify common and divergent themes.

**Results:** The study found that condoms are moderately accessible for community members, especially by PLHIV and KPs. Majority have never seen a female condom. Barriers found to be limiting access to male and female condoms in Zanzibar included: stigma faced at condom distribution outlets and unfriendliness of some service providers who violated privacy. Most of the influential persons within the Government Ministries, Departments and Agencies (MDAs) and Development Partners held the notion that condoms play a critical function to prevent STIs and unplanned pregnancies, therefore condom use should be promoted.

**Conclusions and Recommendations:** Male condoms are moderately accessible especially in urban areas. There is scarcity of female condoms. More education on male and female condom, client privacy and confidentiality are of paramount importance to improve condom programming in Zanzibar.

**Key words:** Condom, access, Zanzibar

## **THPEC151**

### **Peer Education Approach for the Promotion of Behavioural Change among Young Adolescents in the Yaounde 4 and 6. Localities, 2019**

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**Issues:** CAMPHIA survey of 2017 report presents adolescents as one of the most at-risk populations for HIV as a result of their behaviour and lack of Sexual and reproductive health lessons.. Supported by USAID-CRS, (Association des Femmes Actives et Solidaires) AFASO through the project (KEY INTERVENTIONS TO DEVELOP SYSTEMS AND SERVICE) KIDSS leads a steadfast fight against behaviours that expose adolescents to HIV through the promotion of SRH (Sexual and Reproductive Health).

**Descriptions:** In order to Improve and promote healthy behavior among adolescents in the districts of Yaounde 4 and 6, between September 2018 and July 2019, Peer Educators were recruited and trained on SRH and HIV prevention, They constitute cohorts during home visits in order to carry out Educative talks on SRH. This is coupled by the support and school placements Of adolescents out of school .

**Lessons learned:** Results obtained after the 10 months of implementation of this activity, shows that 15 PEs (Peers Educators) between the ages 12 to 18 years old are trained; EC (Educational Talk) is organized every week by these PEs in the homes of beneficiaries, 90% (325 adolescents) are educated on Sexual and Reproductive Health and HIV prevention. 80 young adolescents have received Educational support and placement in secondary as well as high schools.

**Next steps:** We notice a good attitude change among adolescents who have benefited from peer education for behavioural change and SRH. Thus, it would be beneficial for Cameroon to promote and valorise the initiative of Peer Education so as improve the lives of many adolescents.



## THPEC152

### Peer Navigation Improves Linkage to HIV Treatment and Retention among MSM and TG in Malawi

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**Issues:** PEPFAR funded-LINKAGES project reaches out to men who have sex with men (MSM) and transgender people (TG) with HIV prevention, care and treatment services through the Centre for the Development of People (CEDEP) in Malawi. Despite improved HIV case finding, CEDEP has registered low rate of linkage to antiretroviral therapy (ART). We present experience from the implementation of peer navigation for successful linkage to ART among MSM in Malawi..

**Descriptions:** Using Ministry of Health approved PN training curriculum, 18 peer navigators (PNs) drawn from LINKAGES-supported districts of Lilongwe, Mzuzu, Blantyre and Mangochi were trained. The 5 -day PN training focused on imparting skills needed for positive living including identification of hard-to-reach HIV positive peers to support provision of community-based care and support services to improve ART uptake and retention. PNs are HIV-positive MSM who willingly accept to support their peers living with HIV including support for treatment adherence, screening for sexually transmitted infections, gender-based violence and risk reduction. Routine program data were collected and used for the analysis

**Lessons learned:** Between February 2016 and September 2017, a total of 97 clients were linked to ART. Following the PN training, the program recorded a three-fold increase (313%) in linkage to ART between October 2017 to September 2018 (493 clients). PNs also supported 57 HIV-positive individuals who defaulted treatment to re-initiate ART. Out of the total 493 newly initiated on ART and the 57 who were re-initiated, 384 were eligible for viral load testing against none that was identified the previous year. Of the 384, 379 viral loads results were received and, 365 were virally suppressed (below 1000 copies/ml), representing 96 percent suppression rate.

**Next steps:** The introduction of peer navigation played a significant role in increasing linkage to ART, improving retention and access to viral load testing. Programs that target MSM and TG persons with HIV care and treatment services should invest in the training of PNs to maximize ART uptake and to ensure retention in care and viral load suppression.

## THPEC153

### Scaling up Condom Access to the Last Mile: Mapping of Distribution Points in Kenya

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**Issues:** Despite high levels of knowledge about condom use and limiting sexual partners to reduce sexual transmission of HIV, condom use is still low in Kenya. The market potential for condoms and its distribution has not been adequately exploited to meet total condom needs. The universe of need for Kenya in 2016 was 359.3 million condoms, yet 279 million were distributed representing 78% of total condom need nationally. Condom use at last sexual intercourse marginally increased from 37% to 38.8% in males and 31.6% to 31.8% in females. In 2017 polling booth survey, 23% of female sex workers and 22% of MSM reported to have had unprotected sex due to unavailability of condoms. A key contributor to low utilization is the unavailability of condoms at the point of need.

**Descriptions:** In 2018 we conducted an assessment to map existing and potential condom distribution points nationally. The aim was to identify key locations where sex is likely to occur and condoms required. Included were bars and lodges, restaurants, hotels, streets, guest houses, beaches. We collected data on location, type of establishment, availability of male and female condoms, dispensers, source of condoms and patronage of the establishment. The mapping was conducted by AIDS Control officers in their respective constituencies countrywide.

**Lessons learned:** 17854 distribution points were identified of which 84% were bars with lodgings. Dispensers were available in only 14% of these points. A targeted approach specifically targeting bars with lodgings will significantly increase condom access. Between March and May 2019, 2,468,194 male condoms were distributed through new outlets. There are limited condom options in most of the points. Male condoms were most accessible and found in 65% of the points of which 29% were public sector. Female condoms were however available in only 18% of the points. Overall 15% of counties had female condoms. Private sector male condoms were available in 42% of the points. Both public and private sector male condoms were available in only 15% of the points.

**Next steps:** Establishment of a public-private partnership to facilitate installation and maintenance of condom dispensers in all the establishments and regular stocking of these dispensers with both male and female condoms. Strengthening of the reporting beyond the health facility to track usage and maintain minimum stock levels and integration of total market approach into condom programming for sustainability.

## THPEC154

### Peer Led Biomedical HIV Prevention Education among Lesbian, Gay, Bisexual, Intersex and Transgender Youth in Malawi

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**Issues:** : The LGBTI community contribute significantly to the high HIV burden in Malawi. In view of the growing prevalence of HIV infection among LGBTI community in Malawi, it was important to educate and support LGBTI persons to access biomedical HIV prevention tools. This project focused on reaching out to youth who identify as Lesbian, Gay, Bisexual, and Transgender persons in Malawi to dispel myths and misconceptions on HIV acquisition/transmission, facilitate their access to HIV testing services (HTS), and educate them on how to access biomedical HIV prevention tools.

**Descriptions:** The target population were LGBTI identified persons aged 15 - 24 years. Participants were reached through peer contacts to attend focused group discussions held twice weekly for four weeks led by a trained transgender person. Participants were grouped based on their sexual orientation and attended each 90 minutes' intense education sessions. Twelve main topics on gender identity and sexual orientation, HIV, AIDS, biomedical HIV prevention tools, PrEP, PEP, vaginal rings, lubricants, dental dams, including their uses, accessibility, common myths and misconceptions were covered over the four weeks' period. Condom demonstrations and songs on behavioral change communication were part of training activities. Skills building sessions were also included. Each session ended with a question and answer session.

**Lessons learned:** Peer led interventions can facilitate access of LGBTI youth to HIV prevention services. Of the 200 LGBTI youth participants, a vast majority 65(32%) were trans-women, 45(23%) trans-men and 16% each of gay and lesbians respectively. Baseline assessment shows that knowledge of gender identity and sexual orientation, use of biomedical HIV prevention tools and personal perception of HIV risk among the LGBTI youth were low prior to the intervention. The 200 LGBTI youth who were exposed to the four weeks' intense education session attended the complete 8 sessions and learnt about new HIV prevention tools, their uses and accessibility. While (160) 80% of the participants had access to HTS for the first time, out of the 160, 90 tested HIV positive and were linked to care

**Next steps:** Peer led educational sessions using trained community members can help improve LGBTI youth knowledge on HIV prevention and access to HTS. There is need for relevant stakeholders to create more opportunities for peer led biomedical HIV prevention interventions for LGBTI communities

## THPEC155

### Accompagnement Médico-communautaire du 1er Centre Communautaire de Prise en Charge des Usagers de Drogues en Afrique Francophone

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**Sujet:** En Août 2019 a été ouvert à Abidjan le premier centre communautaire de prise en charge holistique des Usagers de Drogues (UD) en Afrique Francophone. Les éducateurs pairs du Centre d'Accompagnement et de Soins en Addictologie (CASA), sont placés au centre des interventions pour favoriser la mise dans les soins et l'observance thérapeutique des UD exclus de la cellule familiale, très éloignés du système de santé en raison d'une forte stigmatisation et d'une politique répressive.

**Description:** La prévalence VIH au sein de la communauté d'UD précaires est estimée à Abidjan à 5,64%, celle de la Tuberculose à 9,8% (50 fois celle de la population générale).

10 Educateurs pairs interviennent de façon transversale dans toutes les activités du centre. Cela se traduit par la mise en place d'un accompagnement médico-communautaire quotidien du VIH et de la tuberculose (TB) incluant les référencement et le suivi des UD malades.

**Leçons apprises:** Sur la période d'avril à juin 2019, 1735 UD ont fréquenté les services du CASA pour 682 consultations médicales. Les éducateurs pairs ont réalisé 519 accompagnements pour des visites hospitalières, des VAD, remise de médicaments, suivi d'examens, recherche familiale etc. dont 131 spécialement pour le suivi des patients PVVIH et TB+. La prise en charge communautaire consiste à accompagner l'UD dès le diagnostic posé jusqu'à l'obtention d'une charge virale indétectable pour les PVVIH et/ou une guérison de la TB.

Cette approche médico-communautaire prouve chaque jour un peu plus son efficacité dans la prise en charge des UD surtout en matière d'observance au traitement pour les PVVIH et TB+.

**Prochaines étapes:** Cette approche médico-communautaire représente une solution efficace et pertinente a la prise en charge des UD. Le CASA ambitionne donc d'accroître l'équipe communautaire et de développer cette approche pour d'autres interventions telles que la réponse à la demande de sevrage et la dispensation de la méthadone.

## THPEC156

### Community-led HIV Prevention Increases HIV-related Knowledge in Malawi

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**Background:** Ending new HIV infections is a global priority. Knowledge alone is insufficient, but low HIV knowledge is a barrier to HIV prevention. We examined whether HIV knowledge increased when an evidence-based peer group intervention was implemented by community volunteers in rural Malawi.

**Methods:** Using a stepped-wedge design, 3 communities sequentially rolled out the intervention. We now have surveys at Time 1 (T1) and T2, when 1 community had offered the intervention (n = 299), and 2 were controls (n = 627). Using multiple regression, we analyzed T1-T2 change scores in mean HIV knowledge (# correct of 5 UNAIDS prevention items and 4 PMTCT items from the Demographic and Health survey, range = 0-9), controlling for gender, age, education, if living with partner, and if highly involved in religious activities. We then examined adequate HIV prevention knowledge at T2 (defined by USAID as correctly answering all 5 items), using logistic regression controlling for T1 knowledge and the same background factors. The sample was 52% female, mean age was 24.3, 42% lived with a partner, mean education was 8.4 years and 64% reported being highly involved in religious activities.

**Results:** At T1, the mean knowledge score was 7.43. At T2, scores increased and were higher for the intervention group (I, 7.77; C, 7.66.  $p < 0.01$ ). In multiple regression, knowledge change scores were higher for the intervention group ( $\beta = .36$  (0.10),  $p < 0.001$ ); religious involvement was the only other predictor ( $\beta = -.25$  (0.10),  $p < 0.05$ ). Gender and age did not relate to knowledge increase, but adults had higher scores than youth. Among youth, males had higher knowledge than females, (T1, 7.37 vs 6.91; T2, 7.81 vs. 7.33;  $p < 0.01$ ), while among adults, women had higher mean scores (T1, 7.94 vs. 7.65; T2, 8.17 vs. 7.85).

Turning to adequate knowledge, the level at T1 was low (42%), increasing at T2 for both groups (I, 57%; C, 48%,  $p < 0.01$ ). Intervention participants were nearly 1.5 times more likely to have adequate knowledge (OR 1.48, CI 1.10-2.00). Other predictors were T1 knowledge, education and living with partner. Gender and age did not relate to adequate knowledge.

**Conclusions:** An intervention delivered by community volunteers increased HIV knowledge and is an innovative and effective strategy for scaling up prevention in Africa. HIV counseling and testing at antenatal care may have reversed the HIV knowledge gender gap among adults.

**Keywords:** HIV knowledge, HIV prevention, Malawi

## **THPEC157**

### **Strengthening School Community Accountability for the Girl Child (SAGE) as Means of Scaling up HIV Prevention Interventions across 151 Secondary Schools in Uganda**

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**Issues:** Despite Uganda's success in combating HIV and AIDS, new HIV infections among adolescent girls and young women ages 15-24 are on the rise. Young women are reporting increased cases of sexually transmitted infections and gender-based violence.

Negative cultural norms and gender-based violence especially early marriages and early pregnancies expose adolescent girls to HIV infection that contributes to dropping out of school.

**Descriptions:** SAGE reached out to 45,000 Adolescent Girls (AGs) aged 15 -19 years over the two years of project implementation. The primary focus of the project was to keep the AGs in school and prevent them from getting HIV infection. This was done through establishment of functional peer-led Early Warning Systems and Stay in School Committees, Safe School Contracts and Safety Friends strategies. It was intended to help adolescents achieve healthy sexual behaviors and delayed sexual debut; prevent drop out from school, reduce violence and new HIV infection; adhere to anti-retro-viral therapy; promote positive attitudes towards people living with HIV; reduce stigma and promote positive health-seeking behaviors. SAGE worked with 151 targeted schools in ten Districts in Uganda.

**Lessons learned:** Establishment of adolescent girls-led Early Warning System at community level (EWS) prevent AGs from dropping out of school.

strengthening school-community linkages to support AGs 15-19 to remain in school contributed to the reduction of new HIV infections

strengthening schools linkages with health care providers for Youth Friendly Reproductive Health Services including HCT, enhances referrals for care and treatment for the AGs in schools.

**Next steps:** Health education is key in HIV Prevention Schools together with the health workers and the peer educators should always emphasize sharing information on HIV prevention. With the trained Peer educators, Senior women and men teachers, Adult Stay In School Committee, Hope Teams and the encouragement to integrate HIV health education in their continuity.

Schools should adopt safety schools concepts and owned it. Assign a teacher and peer educators to manage and run the safety place.

Ministry of Education should adopt a method where each school is given a referral register and a referral book and at least two teachers and peer educators trained in referral and linkages.

Follow up of positive AGs to support adherence should continue as the collaboration between the health center and the schools.

## THPEC158

### Information, Education and Communication (IEC) Sessions One of Approaches of HIV and STIs Prevention among Sex Workers

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**Issues:** Rwanda is at 3% of HIV Prevalence, with 45,8 % of HIV Prevalence among Female Sex Workers, whom their knowledge on preventive measures has to be upgraded and behaviour change vis-à-vis sexual practices and health services use is needed. There is a need of well-structured approaches to reduce new HIV infections by sexual contacts via key populations including Female Sex Workers. ASOFERWA have served 1509 FSWs from 6 sectors of Kicukiro District and 2 sectors of Gasabo District under FHI /ROADS Project funded by USAID from October 2009 to June 2016 and since April 2018 until now we are serving 1458 FSWs from three districts of Kamonyi, Gicumbi and Bugesera in the area of HIV Prevention under the support of Global Fund via MoH/RBC.

**Descriptions:** a. Identification was done through key informants from a given hotspot and site, we have managed to identify 2,780 FSWs and so far 1458 FSWs have been enrolled in the program and are being served under the project.

b. IEC Sessions of 15 to 20 FSWs as group members, led and facilitated by peer educators gave room for skills transfer and discussions around different topics regarding sexual practices, access and use of health services.

c. Referral system based on IEC Sessions groups serves to manage, monitor and control HIV and STIs status among female sex workers for a given period and location.

**Lessons learned:** 1458 FSWs have received HIV and STIs Prevention interventions using IEC Sessions approach; as results their serological status is known, health services are provided to them, their high risk behaviors are testified and measures are taken by them under Condom use, Drugs abuse, STIs screening and ARV treatment.

HIV and STIs Transmission mode and prevention measures are discussed and known. 1458 FSWs across three districts testified and are committed for the reduction of new HIV Infections; are mobilizing their partners for health services.

Through IEC Sessions led by Peer educators, among 2780 FSWs identified, 1458 FSWs were enrolled in the program; 1943 IEC Sessions were conducted; 1823370 Condoms were distributed and 1254 FSWs were referred for health services.

**Next steps:** IEC Sessions led by peer educators have positive impact on key populations themselves and to the entire community. The reality and practical mechanisms are revealed to inform planners on proper strategies for reaching the target and goals. Good to invest in IEC Sessions once targeting key populations.

## THPEC159

### **Getting to Zero HIV Infection by Nigerian In-school Children and Adolescents: An Appraisal of the Implementation and Contents of the Family Life and HIV Education Curriculum**

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**Background:** With a population of over 200million, Nigeria has the second largest HIV epidemic globally. 31.4% of the population belongs to ages 5-19 which is the school age in Nigeria. With a high rate of HIV infection in 2004, the Federal Ministry of Education approved the Family Life and HIV Education (FLHE) curriculum for mainstreaming into subjects in all schools. FLHE is designed to promote awareness & prevention of HIV through acquisition of knowledge of self & family, cultivating right attitude towards prevention of HIV and equipping students with age-appropriate life skills for effective behaviour. However, data show that few adolescents have been tested for HIV & deaths arising from AIDS among adolescents increased over the last decade while reduction was recorded among other age groups (UNICEF 2017; Goldberg 2016). Sex assault is also higher among those below 20. In 2018, UNESCO applied its global Sexuality Education Review Assessment Tool (SERAT) on the FLHE programme in Nigeria in order to gain empirical and substantive insight into the extent that the FLHE is capable of enabling young Nigerians access Comprehensive Sexuality Education (CSE) thus prevent HIV infection.

**Methods:** FLHE was analysed with the SERAT using Literature review, interview of stakeholders and comparison of the FLHE curriculum with subjects where it was mainstreamed. For each age cohort, the SERAT was used to appraise the focus of learning and the themes that are covered in the modules as a way of assessing the contents by key concepts and focus of learning

**Results:**

Presentation at two levels: Extent that FLHE issues were mainstreamed into different subjects and the degree to which FLHE curriculum reflect CSE. The analysis shows that issues in the FLHE Curriculum were not mainstreamed into all subjects, the mainstreaming was weak, tangential and geared towards knowledge with little emphasis on skills. None of the modules adequately cover issues relating to human rights, gender and social norms

**Conclusions:** FLHE curriculum in Nigeria is obsolete and does not capture all the issues necessary for adequate sexuality, life skills and HIV prevention. This, perhaps, explains the dismal epidemiological statistics and persistent vulnerability of this group to STIs, poor disposition to life skills and consequently HIV prevention. There is an urgent need to review the curriculum to respond to emerging challenges like Human Rights and GBV that increase vulnerability to HIV infection.



## **THPEC160**

### **Reducing New HIV Infections through Economic Empowerment of Female Sex Workers in Rwanda**

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**Issues:** The economic dependence among female Sex workers was seen as a driver of the HIV epidemic in Rwanda, where we have 3% of HIV Prevalence at National level and 45,8 % among Female Sex Workers. Low employment, low income and poor social conditions make women more vulnerable to HIV which is associated to inability to negotiate safe sex, looking for the livelihoods, and lack of choice. Among their clients we have truck and motorcycle drivers who spend a period of time away from their families, ready to pay for sexual intercourse. There is a need of addressing the economic inequalities, poor social conditions and high HIV prevalence among female sex workers in Rwanda. Interventions aimed at economically empowering have impact in reducing new HIV infections and risk among FSWs and their community.

**Descriptions:** The programme implemented by ASOFERWA, under USAID support, for three years in Gasabo and Kicukiro districts. Data show beneficiaries reached and assisted with business skills training, access to start-up capital, and access to health services. Tangible results include Marembo Market accommodating 60 businesses done by women former female sex workers in Gikondo sector /Kicukiro District. Success stories registered related to negotiation power, job creation, economic independence and improvement of social conditions. The same 100 women former FSWs and low income women from Gasabo district involved in hand crafts businesses, working on small baskets, Jewels, decoration stuff, near Kobil Fuel Station/Gatsata. Testify being free and safe from high risk behaviors to HIV and striving for their well-being.

**Lessons learned:** There is a closer link between the socioeconomic status of women and their HIV vulnerability. The income generating activities impacted positively their lives. Averagely they earn 60 \$ per month, per person. All 160 women reported a significant decrease of engagement in sex work and shifted to having one partner for life and focusing on their future. The same approach can be duplicated in other location having active female Sex workers for effective HIV prevention program. Women in sex work are not necessarily commercial sex workers, but mothers, girls or small business traders that try to complement income with sex.

**Next steps:** Basing on experience, needs assessment among female sex workers groups is needed to clarify what kind of interventions needed and link them with economic empowerment strategy, HIV prevention and behavior change.

## THPEC161

### Youth Photovoice: Engaging Youth as Change Agents for Community-level Youth HIV Prevention in Malawi

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**Background:** A third or more of new HIV infections in Malawi occur among youth. Photovoice uses photographs to trigger in-depth analysis and develop action plans for community change, but has not been used in Africa to address community factors affecting youth HIV-risk behaviors. We used photovoice to develop and implement youth-driven action plans to address community situations promoting youth risky sexual behaviors in Phalombe, Malawi.

**Methods:** We collaborated with a community-based youth organization (CBO) to conduct a photovoice project with 24 youth ages 13-17. Using photographs as triggers for small group critical analysis, youth developed action plans to reduce community factors affecting youth HIV risk. Eight months later, we interviewed youth, parents and 3 CBO volunteers to identify changes achieved.

**Results:** Youth developed action plans addressing community situations associated with HIV risk: initiation ceremonies that emphasize sexual engagement, celebrations and religious activities that end after sunset, and bars or rest houses that provide opportunities to engage in sex. After presenting these plans to parents and leaders, they worked with CBO members to implement plans to raise public awareness and reduce opportunities for risky behaviors. Eight months later, changes included relocating initiation ceremonies to churches, parent-initiated bylaw changes to discourage youth attendance at bars and rest houses, and shifting church-related activities to end before sunset. Parents and leaders observed less risky behaviors among youth and growth in photovoice participants' confidence, communication skills, and abstract thinking.

**Conclusions and Recommendations:** Photovoice provided a developmentally appropriate way for youth to identify community problems and collaborate with adults to achieve recommended community changes. This youth-led project uncovered ways that action plans can lead to implementation using an innovative, sustainable and participatory approach. Furthermore, this project provided opportunities for youth to not only tap into their own agency but also influence the agency and well-being of others in their community.

**HIV prevention, youth, photovoice, community-level change, Malawi**

## THPEC162

### Can Community Volunteers Deliver a Peer Group Intervention for HIV Prevention with High Fidelity?

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**Background:** Engaging communities to scale up effective interventions is key to ending new HIV infections by 2030. An important and often unexamined implementation science question is whether the intervention, when offered by community volunteers, is implemented with the high fidelity needed to retain the intervention's effectiveness. Here we examine the fidelity with which trained community volunteers, with strong support of community leadership and minimal support of universities and health systems, implemented an efficacious peer group for HIV prevention in rural Malawi.

**Methods:** Ownership of the intervention was transferred from researchers to rural community leaders and volunteers, who organized the program and facilitated the peer group sessions. 58 peer leaders (50% males) received a 2-week training to deliver a 6-session intervention that combined HIV prevention facts with role plays and games to promote reflection and group support for risk behavior change. This implementation study used quantitative observation to assess fidelity. Trained researchers observed 272 peer group sessions using a tested rating tool: 126 (46%) groups of males and 146 (54%) of females. Data were analyzed using descriptive statistics and Pearson correlations. There were no significant differences in fidelity scores between groups of males and females, so results presented include all observations.

**Results:** Ratings equaled or exceeded those found in our previous research. Trained peer group leaders covered planned content completely and accurately in 99% of observed sessions. The 3-item Participant Engagement Index (group members' engagement in session content) was very high ( $M = 5.63, \pm 0.652$ , maximum = 6). The 5-item Group Facilitation Index demonstrated peer leaders' strong group facilitation skills ( $M = 18.35 \pm 1.74$ , maximum = 20). The 5-item Session Management Index assessing peer leaders' presentation skills was also very high ( $M = 18.21 \pm 1.61$ , maximum = 20). Peer leaders' group facilitation was positively but weakly correlated with group member's engagement ( $r = .203, \alpha = .002$ ) and strongly correlated with session management ( $r = .657, \alpha < .000$ ).

**Conclusions:** These results provide strong evidence that well-trained community volunteers can deliver an effective intervention with high fidelity. Scaling up HIV prevention interventions by communities can be recommended when fidelity is maintained.

**Fidelity, HIV prevention, scale-up, community volunteers, peer group**

## THPEC163

### **Building Adequate Teacher's Capacity to Provide Sustained Sexuality Education through the Whole School Approach Strategy: Experiences from the Get up Speak out Project in Uganda**

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**Issues:** While teacher-led sexuality education has been sighted as an effective strategy to improve access to sexuality education and ultimately adolescent health outcomes, there is little investment in building capacity of the teachers to deliver the comprehensive sexuality education to adolescents. Drawing from the experiences of implementation the Whole School Approach (WSA) strategy implemented among adolescents in primary and secondary schools in Uganda, we argue that building the capacity of teachers is an effective strategy for increasing access to sexuality education adolescents in schools in a sustainable way.

**Description:** To equip teachers with knowledge and skills to provide quality sexuality education in schools, Straight Talk Foundation conducted training and mentorship sessions for 220 teachers in Sexual Reproductive Health and Rights from 60 primary and secondary schools. The trained teachers have conducted weekly learning group sessions targeting a maximum of 50 learners with sexuality education in their respective school. During the period March to June, 2019, the sessions reached a total of 11,000 (F-7,015, M-3,985) in school adolescents. The learning sessions are also supported by peer educators and youth led monitors who mobilize, conduct peer to peer sessions, referrals to teachers and documentation of ASRH activities in schools.

**Lessons learned:** The teacher led sexuality education through the Whole School Approach (WSA) strategy is empowering the lives of young people. Through the Whole school approach intervention, school management have actively supported SRHR education in schools through time tabling of sexuality education (SE) to enhance learning sessions and a small budget to support SE activities in schools. This support has enabled establishment of safe spaces for young people, talking compound, and improved communication between the school communities. Additionally, improved teaching capacity for ASRHR teachers has been enhanced through trainings, provision of quality materials to guide sessions, peer support for teachers and training peer educators as well as use of SE materials.

## THPEC164

### Le Dépistage Familial Communautaire des Enfants de 0 à 19 Ans. Expérience de la République Centrafricaine (RCA)

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En RCA, les < 15 ans infectés par le VIH est estimé à 9600 en 2018. La couverture en dépistage et en traitement antirétroviral est respectivement de 22% et 12%. Pour combler ce gap, un plan d'accélération de la prise en charge pédiatrique du VIH a été élaboré. La RCA a organisé une campagne de dépistage familial communautaire en 2018. L'objet de cette étude est de présenter les résultats de cette campagne.

**Méthodologie:** C'est une étude transversale et descriptive allant du 1<sup>er</sup> octobre au 31 décembre 2018 dans 8 unités de prise en charge du VIH (UPEC) de Bangui. Etaient inclus, tous les enfants de 0 à 19 ans, issus d'une famille PVVIH dont au moins l'un des parents était infectés par le VIH ayant donné son consentement éclairé. Dans chaque UPEC, les patients sous ARV ont été contactés et des données sur leurs enfants ont été collectées à partir de l'outil arbre généalogique. Cela a permis d'identifier les enfants de statut sérologique inconnu. Les parents étaient sensibilisés sur l'offre de dépistage et informés de la descente des relais communautaires formés dans leurs familles pour effectuer le dépistage. Les enfants dépistés positifs étaient référés à l'UPEC pour une confirmation et prise en charge. Des informations complémentaires ont été collectées sur les enfants à l'aide d'un questionnaire.

**Résultats:** Sur **2603** enfants de **4405** familles PVVIH dépistés, **170** étaient positifs. Parmi les enfants dépistés, 61% étaient des filles, 16% avaient pour patient index le père, 79% la mère. Les < 9 ans représentaient 26%, les 10 à 19 ans -74% ; 2% étaient orphelins, 75% scolarisés dont 92% en primaire et 0,7% au secondaire. 25% occupaient le premier rang dans la fratrie, 27% le second rang. 127 enfants (5%) étaient sexuellement actifs dont 15,7% < 15 ans. Parmi les 170 enfants infectés, l'âge était respectivement de < 1 ans - (2,4%), 1 à 4 ans (3,5%), 5 à 9 ans (5,9%), 10 à 14 ans (12,4%), 15 à 19 (75,8%) ; 87 % étaient au stade I de l'OMS et 1.2% au stade 4 ; 11 % avaient une infection opportuniste à l'initiation du traitement. Les enfants dépistés positifs ont été mis sous traitement dont 23% avaient une Charge virale indétectable après 6 mois de suivi.

**Conclusion:** Le dépistage familial communautaire a permis de toucher plus d'enfants infectés surtout les adolescents par rapport aux autres stratégies. Cette stratégie est une opportunité pour accroître le taux de dépistage et d'accès au traitement.

**Mots clés:** Dépistage familial, RCA.

## **THPEC165**

### **Partnerships with Non-HEALTH - Civil Society Organizations Critical for Reaching 90-90-90**

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**Issues:** AIDS HEALTHCARE FOUNDATION (AHF) India - partners with 19 Civil Society Organisations (CSOs) in implementing a Community-Based HIV testing program across India. These CSOs are grassroots organisations working in different community development issues beyond health care, but have incorporated community-based HIV testing among vulnerable, high-risk populations and migrant workers in their respective areas of work

**Descriptions:** With hands-on training, specific tasks can be moved from highly trained health care workers to people with lower qualifications working in remote settings. In this study, teams consisted of a counsellor, testing personnel, linkage coordinator, and outreach worker with no prior experience in HIV work. To build knowledge and enhance skills the staff were trained intensively for 5 days on basics of HIV, national protocols, HIV/AIDS law, counselling, community-based rapid testing, universal safety precautions, project management, including stock management, reporting and finance. The M&E manager and prevention coordinator conducted periodical monitoring of each implementing site and provided supportive supervision.

**Lessons learned:** The CSOs conducted a little over 0.75 million HIV rapid tests in the field and identified 6820 positive clients (0.90% sero positivity) and linked 5528 to ART (81%) through accompanied referral in 2017 -2018. During 2017, the sero positivity was 0.8% and linkage to ART was 75%, and in 2018 the sero positivity was 1% and linkage to ART was 87%, a significant improvement after hands-on mentoring and supportive supervision.

**Next steps:** "Task shifting" of HIV testing services to CSOs working in non-health care developmental areas at a grassroots level and building their capacities with appropriate training and supportive supervision represents an effective strategy for reaching out to a large number of people in remote locations. This further leads to improvements in enrolment and retention in care. Many CSOs were able to anchor themselves as health catalysts in their respective communities by participating in the task shifting strategy.

The results indicate that governments should implement task shifting of HIV services to non-healthcare focused CSOs, with accompanying intensive training, as a way to achieve the first 90 target of the 90-90-90 strategy.

## THPEC166

### **Male and Female Condom and Lubricant Use by Non Brothel Based Female Sex Workers in Ibadan Metropolis, Oyo State: Acceptability and Obstacles**

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**Background:** Despite the extensive literature on barriers and facilitators of condom use among both males and females, studies have not taken into cognizance the understanding of individual differences with regards to adoption and utilization of lubricant and condoms as health behaviour. This study examines the factors that influence use of safe sex products among Non Brothel Based FSWs (NBFSWs) selected from hotspots in Ibadan Metropolis, Oyo State, Nigeria.

**Method:** The study was a descriptive cross-sectional survey involving 250 FSWs in brothel across intervention sites selected through a multistage sampling technique. The survey was carried out using pre-tested structured questionnaires consisted of demographic characteristics, sexual activity, transactional sex, awareness of male/female condom, attitude towards the female condom/lubricant and perceived confidence to use condom. FSWs were recruited from the entertainment venues where there is significant concentration of high risk groups transacting sex.

**Results:** Out of the 250 sex in the study, majority (64.4%) of them belonged to the age group of 25-35 years. Most (72.6%) were single/living alone, or with friends/family members. The rest were either married (24.7%) or separated/widowed (2.7%). More than half of the sex workers received formal education, with close to half of them still in tertiary institutions. More than half of the sex workers (51.4%) did not use condoms consistently during sex with clients. Nearly 60% of respondents had "never" used a condom with their boyfriends/regular partners. Lubricant use is low as majority of the girls interviewed said they have not used or purchases the product before. Majority (78.8%) had ever consumed alcohol in their lives and of these, 13% consumed it daily, 43.8% consumed it at least once a week, and 13.7% had it monthly. Entertainment venues were found to provide a high risk environment for transactional sex. Poverty, male partner refusal to use a condom, trust, alcohol use and beliefs that condom use kills the mood for sex remain key obstacle to consistent condom.

**Conclusion:** Strategies for safe sex-behaviour are needed among non-brothel sex workers and their in order to limit the spread of HIV/AIDS epidemic among them and in the general population.

## THPEC167

### **Nigerian North Central Prisons Need the Most Targeted HIV AIDS Prevention Interventions**

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**Background:** The HIV/AIDS epidemic is still one of the greatest health and development challenges today. Nigeria has the second highest burden of Human Immuno- deficiency Virus (HIV) infection in the world. The present size of prison population constitutes a group that calls for focused attention. The prison HIV situation is particularly important and delicate when the interaction between prison and non-prison communities is considered. Released prisoners carry their infection and risk behaviours into the general population increasing the risk of transmission. Factors such as prison infrastructure, criminal justice system, and mode of prison management in addition to the HIV risk behaviours, such as unsafe sexual activities and injecting drug use, also contribute immensely to the vulnerability to HIV and AIDS in prison. This study was conducted to determine HIV and AIDS situation in Nigerian Prisons.

**Methods:** This study applied both quantitative and qualitative data collection methods. The study was conducted in twelve prisons in six states across the six (6) geopolitical zones in Nigeria. Obtained ethical approval from the National Health Research Ethics Committee. Focus group discussions and informal interviews were conducted for Prison staff and inmates following obtaining an informed consent for both the biological and behavioral components of this study.

**Results:** A total of 2,511 people in the Nigerian prisons participated in the study of which majority were male (92%). HIV prevalence is higher among prison inmates (2.8%) than in the general population (1.4%). Female prison inmates had higher HIV prevalence (6.9%) than male prison inmates (2.7%). North Central geopolitical zone had the highest HIV prevalence of 7.1%, which was followed by South East Zone with 3.9%, South West zone was 2.8%, North West zone was 2.6%, South South zone with 2.2% and North East zone had the lowest with 1.4%.

**Conclusions and Recommendations:** There is need to target prevention interventions to the prisons in Nigeria with efforts being made to improve the availability of sexual and reproductive health services especially in the North Central zone prisons. This study reveals that the North Central geopolitical zone prisons staff and inmates have the highest HIV prevalence in Nigerian prisons and they should be targeted for HIV interventions.

HIV, Prevalence, Prison



## THPEC168

### Accident d'Exposition au Sang et aux Fluides Pathologiques chez les Travailleurs de Santé dans les Laboratoires d'Analyses Médicales à Bangui, en République Centrafricaine en 2018: Étude Transversale

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**Introduction:** Les travailleurs de santé sont exposés à un risque élevé de contamination par contact avec les fluides pathologiques des patients. Les objectifs principaux de cette étude étaient de décrire la prévalence et les facteurs de risque associés aux accidents d'exposition au sang et aux fluides pathogènes, d'évaluer leurs connaissances, attitude et pratique concernant les agents pathogènes à diffusion hématogène.

**Méthodes:** C'est une étude transversale menée de janvier à mars 2018 parmi le personnel de santé de trente laboratoires d'analyses médicales de Bangui. Des questionnaires auto-administrés ont été utilisés pour collecter les données sur les accidents auto déclarés, les circonstances d'exposition, les facteurs de risque, les connaissances, les attitudes et les pratiques en matière d'accident d'exposition au sang (AES). Les données collectées ont été analysées à l'aide du logiciel SPSS version 22. Des analyses descriptives et analytiques ont été réalisées pour ressortir les fréquences des caractéristiques sociodémographiques et mesurer le risque associé à l'AES.

**Résultats:** Sur 110 travailleurs enrôlés dans l'étude, 50 (45,5%) ont eu au moins un AES et à d'autres liquides infectés. L'âge moyen des répondants était de 38,8 ans (écart-type = 8,4), dont 87,3% d'hommes. Le taux d'exposition le plus élevé a été observé chez les techniciens de surface (75,0%), suivi de l'assistant de laboratoire (53,3%) et du médecin (50,0%). Des blessures par piqûre d'aiguille ont été signalées par 80,0% des participants. L'histoire de la couverture vaccinale montre que; Vaccin contre le VHB (12,7%), BCG (26,4%), méningocoque (24,5%) et anti-tétanos (18,2%). Pour l'analyse de régression logistique, la prophylaxie post-exposition (OR = 3,56; IC à 95%, 1,32 à 9,56; p = 0,01) et la formation ou le recyclage (OR = 2,97; IC à 95%, 1,34 à 6,61; p = 0,007) étaient significatifs. Concernant le niveau de connaissance, 68,2% des répondants ont une bonne connaissance de la définition de l'AES.

**Conclusion:** La routine quotidienne des laboratoires médicaux expose fréquemment les personnels au sang et aux liquides organiques. La formation et la sensibilisation du personnel aux risques professionnels et la couverture vaccinale constituent un atout majeur pour la sécurité des travailleurs de la santé. Un système de surveillance efficace est nécessaire pour évaluer l'efficacité des soins médicaux dispensés aux victimes d'un AES.

## **THPEC169**

### **Determination of Comprehensive Knowledge on HIV & AIDS among In-school Youth (15-19 Years) in Selected Counties in Kenya (Baseline Findings)**

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Adolescents and Young People in Kenya constitute 19% of the total population and reports show that they have been disproportionately affected by HIV and AIDS. Reports show that over 90% of the Kenyan population including Adolescents and Young People have heard about HIV and AIDS. However, according to KDHS 2014, only 57.7% and 51.7% of male and female young people aged 15-19 years have comprehensive HIV and AIDS knowledge respectively.

The National AIDS Control Council developed a booklet on Frequently Asked Questions among the youth to increase knowledge on HIV and AIDS among this age group. This study sought to determine the role of the FAQ Booklet in increasing knowledge among the Adolescents and Young People aged 15-19 years in school, further influencing positive behavior change for reduced new HIV infections.

The study adopted a prospective study design. It was undertaken in 16 out of the 47 counties that were purposively sampled. The study targeted youth aged 15-19 years in day schools in the sampled counties. Data was collected by a facilitator-guided self-administered structured questionnaire and analysed using R statistical software.

A total of 2026 participants were interviewed, 1037 (51.3%) male and 984(48.7%) female. Respondents were able to correctly identify modes of transmission of HIV with knowledge levels being higher than 90%. However, comprehensive knowledge was quite low at 22%, a finding consistent with other Sub-Saharan Countries. On Sexual and Gender Based Violence, majority (93%) were able to define rape, however 60% could not define defilement. Knowledge on stigma and discrimination was found to be low, 60% being able to correctly define stigma while only 52% knew what discrimination is.

There is low comprehensive knowledge on HIV, stigma & discrimination and Sexual & Gender Based violence among adolescents aged 15-19 years in school. It is recommended that the Ministry of Education implements Comprehensive Sexuality Education in schools, ensure HIV information in the curriculum is standardized and aligned to the National Minimum Package of Information and the content delivered correctly by AIDS competent individuals. Sensitize in school adolescents on stigma & discrimination and on Sexual and Gender Based Violence (SGBV) and develop Youth Friendly IEC materials packaged in easy to use adolescent friendly language that communicates effectively to school going adolescents to promote their utilization.

## THPEC170

### **HIV Prevention Programs for Adolescents and Young People: Retention in HIV Programs, Tertiary Institution vs Community Implementation**

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**Issues:** Retention of adolescents and young people in HIV prevention programs proves to be a challenge. Major reasons affecting retention of beneficiaries are the setting where the interventions are implemented, mobility of young people, and the duration of intervention curriculum. The youth is a highly mobile population, which has a negative bearing in the implementation of HIV prevention programs. Most beneficiaries would attend on average five (5) sessions out of an acceptable 9 sessions in communities.

**Descriptions:** World Vision Eswatini in collaboration is implementing a three year HIV Prevention program funded by the Global Fund through CANGO. The project provides a range of interventions to address vulnerabilities of young people in responding to the HIV epidemic. The core project models utilized are the Stepping Stones (SS) at community level and HIV Prevention Toolkit in tertiary.

The primary beneficiaries of the project are out of school Adolescent Girls and Young Women (AGYW) and Adolescent Boys and Young Men (ABYM) aged between 10-24 years in selected communities and tertiary. SS has 13 sessions which participants should at least complete 9 sessions in order to be considered as reached. The 9 sessions cover the fundamental components of HIV Prevention which would equip the young person to adopt good and appropriate HIV prevention practices. The HIV toolkit has 5 contact sessions.

**Lessons learned:** In the implementation of the models it demonstrated that rate of completion of sessions was favorable in tertiary. This has been attributed to retention in the program. Retention in tertiary was influenced by the fact that beneficiaries were in one locality, number of sessions were shorter, and they do not have to look for employment as they are still pursuing their profession studies. Whereas in the constituencies, challenges were experienced with retention due to sessions being longer, beneficiaries being scattered and very mobile.

**Next steps:** It evident that targeting young people in tertiary institutions improves retention and enables programs to reach beneficiaries with interventions within a reasonable time. The longer the number of sessions, the harder it is to retain beneficiaries (community), the shorter the number of sessions, the easier it is to retain beneficiaries (Tertiary). Recommendation is to package sessions in such a way that topics are compressed into lesser number of sessions whilst still maintaining the critical content of the sessions.

## THPEC172

### Access to Health Services for Men Who Have Sex with Men (MSM) and Transgender Women (TGW) in Beira, Mozambique

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**Background:** Médecins Sans Frontières (MSF) has been offering specific health services for Men who have Sex with Men (MSM) and transgender women (TGW) in Beira, Mozambique, since 2014 using a peer-driven model that still has not improved the expected uptake of services. Having this in mind, this qualitative study was carried out to learn more about MSM and TGW communities, to know about their experiences of accessing MSM and TGW-friendly services and to understand their use of face-to-face and virtual networks for engagement to care.

**Methods:** A total of 28 in-depth interviews were carried out with MSM and TGW who were 1) enrolled in MSF's programme (n=11); 2) disengaged from the programme (n=2); and 3) never engaged in the programme (n=15). Purposive and snowball sampling were used. Interviews were conducted and thematically analyzed.

**Results:** Three main themes emerged from the data: stigma and discrimination; the peer-driven model and interviewees' use of face-to-face and virtual platforms for engagement. Stigma and discrimination related to gender or sexual identities as well as discrimination in health-care settings were reported by participants. The peer-education model was appreciated, but it had limited visibility and was overly focused on HIV and health. Face-to-face networks were small and fragmented. The suggestion of using virtual networks currently used for flirting, dating and socializing, could be explored or engaging with health services was favorably received.

**Conclusions and recommendations:** This was the first qualitative study in Beira involving MSM and TGW together eliciting the peer-driven model including platforms for engaging MSM and TGW. Despite its limitations, the study has elicited some important findings about how MSM and TGW communities access health in a setting heavily affected by HIV. Common barriers such as stigma and discrimination lead to reduced health services utilization due to lack of information. The majority of interviewees have access to virtual platforms not for health related discussions but for reducing distance among fragmented MSM and TGW communities around Beira.

Findings may assist in modeling, improving and adapting strategies both at local Ministry of Health level and other actors in order to reduce distance in health-care access by peer-educator outreach and a better tailored model using face-to-face and virtual networks.

## THPEC173

### **An Analysis of the Role Reproductive Health Kits Played in Strengthening Management of Sexually Transmitted Infections during Humanitarian Emergencies in Malawi**

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**Issues:** Over 975,600 people were affected by the floods caused by heavy storms and tropical cyclone Idai from March 2019 in Malawi. 60 people died. Around 90,000 internally displaced people (IDP) were sheltered in 174 IDP sites. The emergency increased the risk of transmission of Sexually Transmitted Infections and HIV due to: disruption of health services, family and social structures, increased cases of transnational sex, increased vulnerability of women and young people due to sexual violence and coercion. These factors contributed to high numbers of Sexually Transmitted Infections in the health facilities serving the camps.

**Descriptions:** With integrated outreach clinics run in the camps by government and other NGOs, districts faced limited medicines and supplies notably STI drugs. This was against a sharp rise in the number of Sexually Transmitted Infections reported both in the camps and health facilities. The reported cases of STIs rose from 17,521 in February 2019 before the emergency to 20,252 at the peak of the emergency in April 2019. UNFPA provided Reproductive Health Kits in 9 of the worst affected districts. The kits included RH Kit 5 (Sexually Transmitted Infection Management kit).

The kit contents of each kit 5 were based on the standard estimates; that 50% of the affected population are normally adults, and that 5% of these were likely to have an STI. Furthermore, 20% were calculated to have genital ulcer syndrome and 50%, urethral discharge syndrome; while 30%, vaginal discharge syndrome. For each syndrome, it was also estimated that there were an additional 25 patients who were children (10 under 30 kg and 15 of 30-45 kg).

**Lessons learned:** The risk of STIs and HIV transmission increases in humanitarian settings due to among other factors disruption of health services. Humanitarian situation exerts pressure on demand for commodities and supplies including drugs for treating STIs. Governments are often overwhelmed by the emergencies and normally struggle to cope. RH Kit 5 (STI management kit) supplied by UNFPA filled a critical gap in treating STIs which could have remained untreated and possibly developed into complications.

**Next steps:** UNFPA plans to preposition RH kits in readiness of any impending emergency. UNFPA to train service providers in delivery of Minimum Initial Service Package (MISP) for Reproductive Health. UNFPA will continue to monitor the trends of STIs during the recovery period to draw contrasts.

## THPEC174

### **Lessons Learned in Using Biomedical Strategy to Address High Prevalence of HIV among Female Sex Workers in Urban Slums in Oyo State, South West Nigeria**

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**Issues:** Urban slums are fast growing in the world due to overpopulation and migration of people from rural to urban areas. Sex work thrive in urban slums, hence the high movement of Female Sex Workers (FSWs) and clients to these areas which has led to increase in risk of transmission of HIV and other communicable diseases and its spread among the population.

**Description:** COSWOHI as sub-sub grantee to the Society for Family Health Global Fund HIV Extension New Funding Model grants mapped FSW hotspots in slums in 4 major towns in Oyo State (Ibadan/Ogbomosho/Saki/Oyo) and adopting the Minimum Prevention Package Intervention, initiated HIV programs to provide access to HIV testing, placement of positive FSWs on ART and facilitate the process of viral suppression to reduce transmission rate. Biomedical intervention was one of the 3 core strategies under Minimum Prevention Package Intervention adopted from January 2018 to June 2019 to contribute to the achievement of the UN 90 90 90 goals. The program worked through key stakeholders, gatekeepers and community outreach workers. FSWs were trained as HIV Counsellor/Testers and Case Managers to counsel, test, refer and link HIV positive FSWs to care. Friendly ART One-Stop-Shop (OSS) was set up to provide "In and Off Facility" (free access and at no costs) treatment and care. Required lubricants and condoms were provided and determined through forecasting. Two FSW Support Groups were set up through which drug refills and pick up was done with help of the Case Managers. 648 FSWs were tested for HIV, 69 tested positive and 66 were linked to care.

**Lessons learned:** There is a high prevalence of HIV among FSWs in urban slums as evidenced by the result of the intervention. Access to treatment requires comprehensive services for sex workers, including actions to overcome stigma and discrimination. Treatment adherence among FSWs has powerful behavioural determinants and is reinforced by FSW-friendly services, peer support, and a supportive policy and legal context. Consistent condom use offers FSWs additional protection from HIV-infected clients who may or may not be on treatment and virally suppressed. FSW-friendly services, including STI and sexual health care, can reduce other STIs, which increase HIV susceptibility.

**Next steps:** Medical personnel will be at COSWOHI's office to strengthen the drop in centre. Social/recreational facilities at the OSS will be improved on to make it more user friendly for Key Populations to access.

## THPEC175

### Ensuring Access to Antiretroviral Therapy in Cross-border Refugee Populations - Cases Study of Refugees in Uganda

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**Issues:** Uganda is the largest refugee hosting country in Africa and the third largest globally with 1.2 million refugees. South Sudan (64.4%) and DR Congo (27.3%), Burundi (3.1%), Somalia (2.4%) and others (2.6%) are countries of origin. These countries have differing levels of HIV prevalence and type of the HIV epidemic. Ensuring access to HIV treatment will contribute to reduction in morbidity and mortality among the refugee population.

**Description:** New arrivals at the borders underwent health screening that include HIV, tuberculosis or exposure to sexual violence and linkage to care. Village Health Teams (VHT) were deployed to move door to door and identifying those with chronic illness, long-term treatment, and those in need of refills of antiretroviral Therapy (ART). Referrals were made to temporary health facilities for ongoing care. Distant MoH HIV care clinics provided weekly outreaches and temporary health facilities linked to the national hub system to transport blood samples for CD4, viral load monitoring and TB sample for GeneXpert testing. Temporary health facilities were converted into permanent health facilities that were formally accredited as HIV care clinics with medical commodities provided by the MoH. Refugees were integrated into the national HIV programme from the outset and financial support for this was provided through emergency and reprogramming the Global Fund grants. A total of 6,999 clients were enrolled into care of which 65.7% (5,208) were refugees and 34.3% (1,791) were nationals. Refugees in care ranged from 57.8% to 91.2%. The proxy prevalence is highest in Parolinya and Imvempi at 1.1% each, followed by Rhino and Palabek at 0.7% each, Bidibidi (0.5%) and Adjumani (0.4%) least. The number of clients enrolled and proxy prevalence depends on both the ethnicity, country of origin and barriers to care including level of stigma and discrimination.

**Lessons learned:** Access and continuation of HIV care is possible during acute influxes of refugees, even in remote resource limited humanitarian settings. Determinants include barriers like stigma and discrimination and enablers such as pre-existing HIV comprehensive service availability in areas where the refugees are settled and favorable host government policies and strategies.

**Next steps:** The partners will continue with community sensitization and engagement to reduce the stigma and discrimination, accreditation of all health facilities to provide ART services.

## THPEC176

### **The Mobility Model: Dynamics of HIV Care and Treatment among Mobile Populations in Zimbabwe**

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**Issues:** Mobility increases risk for disengagement from HIV care. Free HIV treatment is beyond the reach of many undocumented and cross-border Zimbabweans. There is limited information regarding the existing procedures for documentation and management of mobile clients in Zimbabwe.

**Description:** USAID clinical partner, OPHID, has gone the programmatic mile to develop required evidence to contextualize and quantify the influence of mobility upon HIV care and treatment for Zimbabweans. In late 2018 a deep dive assessment was conducted that document how mobility and migration influence access to HIV services for Zimbabwean nationals living cross border. Findings were extensively shared prompting Ministry of Health in Mangwe District to take the proactive step of adding a simple improvised column to their ART attendance register to document residency status of clients accessing HIV care. OPHID in June 2019 further conducted a mixed methods assessment to ascertain the number of clients currently on ART classified as mobile or cross border from the improvised column in their ART register. Data were entered into MS Excel and analysed using STATAv13. Qualitative data were analysed thematically.

**Lesson Learned:** This simple solution to quantify a complex problem allowed OPHID to accurately document that among 2329 Zimbabwean clients accessing HIV care and treatment in Mangwe health facilities, 17% were residing outside of Zimbabwe. Having the residency conversation as standard part of HIV care allowed health care workers to plan with clients to sustain treatment during periods of travel and exploring unique barriers faced by mobile populations to adherence and retention required for viral suppression and sustaining epidemic control. Practical strategies for how to reach clients during periods of travel are discussed and alternative means of follow-up contacts can be documented.

**Next Steps:** These findings underscore the scale of cross-border mobility among Zimbabweans living with HIV residing in cross border regions, and the value of simple modifications in documentation for improving ability to identify, support and monitor subgroups of vulnerable clients. With continued economic hardship, cross-border migration is not likely to abate soon. With USAID support, OPHID then actively engaged with PEPFAR partners in SADC to develop and test program innovations to support mobile clients to sustainably access ARV medication wherever they are in the region.



## **THPEC177**

### **Vernacular Definition of Terms Fueling Stigma and Discrimination against Some Key Populations**

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**Issues:** Targeting key and vulnerable populations in controlling the epidemic of HIV, STIs and TB is at the centre of most interventions. At a global scale the names used to label key populations have since evolved while the local community level vernacular translations and language trees have not changed. The study seeks to understand the perceptions of key stakeholder on the local vernacular names of the key and vulnerable populations

**Descriptions:** Consultative forum meetings, as part of community systems strengthening interventions, were held with rudimentary community-based organizations with strong connectedness to local languages, cultural and value dynamics in Gauteng and North West provinces of South Africa between the period of 2017 and 2018. Thematic analysis was done on perceived affected vernacular names of sex workers, people with disabilities, mental health clients and LGBTIQs was done.

**Lessons learned:** All the eleven South African languages have no friendly commonly used definition and names of sex workers, people with disabilities, mental health clients and LGBTIQs groups. These terms are not easily said out in public without drawing undue attention. The local naming or vernacular translation of the names of these key population groups was noted as the main driver of stigma and discrimination. Vernacular translations were also viewed as degrading, derogatory, shaming and insulting. These respondents indicated that they do not see any possibility of the names being easily changed as they are ingrained in the community cultural beliefs and behavior.

**Next steps:** Health practitioners in consultation with the diverse community leadership and academia need to consult communities on acceptable and appropriate naming of these key population groups. Programme implementation in key populations must take cognisance of continuous language re-engineering appropriate with key populations of HIV/AIDS and STIs. There is need for programmes to actively give impetus to development appropriate language trees in line with the current interventions and policies responding to the epidemic.

## THPEC178

### Acceptability of Partner Notification Services among Men who Have Sex with Men Accessing Care in Health Facilities in Lagos, Nigeria

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**Background:** Partner Notification Services (PNS) are part of the spectrum of care for HIV-positive individuals and their sexual partners, although it is voluntary, it must be acceptable to identify undiagnosed populations at high risk of HIV infection particularly men who have sex with men (MSM) who fear accessing HIV services due to stigma, discrimination and criminalization. This study was done to assess the acceptability of PNS amongst HIV Positive MSM accessing care at three MSM friendly health facilities in Lagos.

**Methods:** A facility based descriptive cross-sectional study using an interviewer administered questionnaire was conducted on 318 HIV positive MSM recruited via snowball sampling technique over a period of nine weeks. Analysis was done using SPSS version 23. Chi Square was used for association between variables and level of significant was set at  $p < 0.05$ .

**Results:** Only half of the respondents have ever heard about PNS out of which 91.6% were offered and a little above average were enrolled into PNS. Major reason for PNS acceptance was for the prevention of partner from being infected while major reason for PNS decline was fear of rejection by partner. Most preferred method was the use of social media closed groups/chatrooms led by a health care provider. No statistically significant association ( $p < 0.05$ ) was found between age ( $p=0.77$ ), employment status ( $p=0.96$ ), time initiated into treatment ( $p=0.44$ ) and enrolment into PNS. There was a statistically significant association between level of education ( $p=0.04$ ), medium of notification (Patient led:  $p=0.001$  & Provider-led:  $p=0.037$ ) and enrolment into PNS.

**Conclusions and Recommendations:** This study showed that PNS information is yet to reach all respondents, about one-third of the study sample have enrolled. Concerns regarding personal, partner relationship and quality of health service delivery contribute to the acceptance and rejection of PNS. Provider-led social media closed groups/chat rooms was preferred over other approaches. A mix of approaches should be offered as PNS options to achieve an optimal HIV testing uptake amongst MSM.

## THPEC179

### **Educational Intervention to Reduce Psychoactive Substance Use among HIV Positive Adolescents in Osun State, Nigeria**

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**Issues:** Several studies have documented a high prevalence of substance use behaviors among young people living with HIV, yet little attention has been paid to this menace. Substance use can have numerous detrimental social, psychological, and health repercussions for people living with HIV, and young people face many unique risks that place their own and others' lives in danger. This intervention therefore designed to reduce abuse of Psychoactive Substance (PS) among HIV positive adolescent in Osun State, Nigeria.

**Description:** This was a 12-month intervention project designed to reduce the use of PS among HIV positive adolescence. A total of 58 In-School (IS) and 82 Out-of-School (OS) Adolescents were recruited from five HIV clinics in Osogbo. A semi-structured interviewer-administered questionnaire was used to obtain baseline information on the participants' socio-demographic characteristics, knowledge of the harmful effects and pattern of PS use. Data were analysed and used for designing a training programme.

**Lessons:** Mean age of participants was  $15.5 \pm 2.6$  years and 89.2% were males. Most (67.4%) and 13.9% of the participants reported daily and occasional use of PS respectively. A significantly higher proportion of OS than of IS were current users (27.1% vs. 3.1%,  $X^2=18.01$ ,  $p < 0.005$ ). Participants' knowledge of PS increased from 21.0% at baseline to 89.9% at 12 months. At baseline 34.5%, 45.9% and 89.7% of the participants reported current use of cannabis, mild stimulants and sedatives respectively. At 12 months, 12.5%, 15.9% and 45.7% reported to use cannabis, mild stimulants and sedatives respectively. Reasons adduced for use of substances among participants were HIV status (89.1%), availability (68.0%) and enhancing performance (45.0%).

**Next steps:** This intervention was successful in increasing knowledge of psychoactive substance and reducing intake of cannabis and mild stimulants yet a higher proportion are still taking sedatives. This next phase of this intervention will engage community leaders and gatekeepers in psychoactive substance cessation programmes to address the menace.

## **THPEC180**

### **Community Intervention in Achieving Retention and Viral Suppression among PLHIV through CHV**

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**Objective:** The objectives of the project are 1) to reduce new HIV infection by 75% by 2019 through viral suppression and retention to care among people living with HIV and 2) reduce AIDS related mortality by 25% by 2019.

**Methodology:** A retrospective study with mixed, Red Cross through Onyx partnered with MOH (Ministry of health) and CHVs (Community Health Volunteers) to offer care and support outside the health facilities for PLHIV in Narok South Sub County. Identification, profiling and training of 64 on HCBC was done. The program targets defaulters, HIV positive pregnant and lactating women, HIV and TB co-infected clients, newly diagnosed clients and adolescent living with HIV. The role of CHV in the program is; a) to offer adherence counseling, psychosocial support, nutritional information and economical strengthening during home visits. b) Community mobilization during outreaches for PLHIV and during RRI to increase HTS uptake. c) To offer referral by Identifying conditions that need services at the health facility. D) Participate in routine data collection by using approved reporting tools.

**Result:** In 3 months, CHVs have recruited 600 PLHIV who are receiving care and treatment through home visits, 389 defaulters were traced back to care and treatment, 103 clients with high viral load (suspected treatment failures) have received home visits and adherence support from the CHVs. This has led to reduction in the number of defaulters, increase viral load uptake and level of stigma. 27 PLHIV are now able to deal with self-stigma as they encouraged their family members to be present during home visits, 29 disclosed their status to their partners and families, CHVs role on Identification has assisted in increasing uptake of HTS among partners of 11 PLHIV clients and their family members. Over 250 PLHIV were reported to be using condoms safely and consistently whereby enhancing self-protection to avoid re-infection or infecting their partners who are negative. Support group outreaches mobilized by CHVs provided a platform to 90 PLHIV who shared their experiences on positive living and finally we have 7 community ART groups lead by CHVs

**Conclusion:** Community intervention in retention on care and viral suppression among PLHIV is very important and has not been utilized, for us to achieve the second and third 90 interventions that are effective in increasing retention in care should be considered for adaptation.

## THPEC181

### Can Phone-based Counseling Reach Key Populations and Encourage them to Get Tested? Findings from Ghana

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**Issues:** The USAID Strengthening the Care Continuum Project, implemented by JSI Research and Training has implemented helpline counselling services to meet the sexual and reproductive health needs of high risk key populations (KPs) including men who have sex with men (MSM), female sex workers (FSW) and their non-paying partners in four regions in Ghana. Access and use of services by KPs, including HIV testing and treatment, are affected by lack of confidentiality, fear of stigma and discrimination and fear of service provider biases and attitudes. The criminalization of KPs' behaviours deter them from accessing HIV testing and screening for sexually transmitted infections (STIs) for fear of arrest, violence and incarceration. These barriers can affect the implementation of the 'Test and Treat' policy and achievement of UNAIDS 90-90-90 targets by 2020. New approaches to HIV testing and service delivery are needed to reach people with HIV who remain undiagnosed especially KPs.

**Descriptions:** The Project works with 11 civil society organizations (CSOs) to encourage KPs to get tested, and if positive, initiate ART in line with the 'Treat All' policy adopted by Ghana in 2017. The project is working with 16 helpline counsellors using phone-based counselling in reaching high risk KPs who cannot be reached through peer educators. These counsellors have been accredited by the National AIDS Control Programme (NACP) and trained on content in HIV counselling skills and ethics on phone counselling.

**Lessons learned:** Data from October 2017 to September 2018 reveals that helpline counsellors reached 2,356 KPs (1,408 MSM and 948 FSW) and provided 52% percent of them with counselling and testing services. Among the number reached and tested, 259 (27%) of the FSWs and 356 (25%) of the MSM were HIV positive. Almost all, (98% and 91%) of HIV positive FSW and MSM respectively were linked to HIV treatment services by phone-based counsellors and built trusting relationship. Some even travelled outside of their home towns to 'meet' and access services with the specific counsellors they talked to on phone. The use of counsellors who are accredited by the NACP promotes sustainability when project funding ceases

**Next steps:** The project is documenting legacy materials for use by government and other stakeholders for scale-up of activities. There is a need for further studies on the cost effectiveness of this approach to inform scale up to similar settings

## **THPEC182**

### **Discuss Aloud HIV and Sexual and Reproductive Health of Young People**

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#### **Issues:**

How is stigma an issue for us?

- Very conservative society
- Silence around sex, sexuality and HIV
- Judgement against teenagers who get pregnant
- Criminalisation of homosexuality
- Discrimination against people living with HIV

This leads to:

- Feelings of shame
- Poor access to SRHR services, including HIV
- Poor health outcomes for people living with and affected by HIV

#### **Descriptions:**

How have we addressed it through radio and social medias so far?

- Invited to speak on radio shows
- In collaboration with journalists, young people identify topics and questions that interest young people and produce podcast
- Young people share their podcast on facebook or other social media
- Young people share views and experiences on radio shows
- Radio hosts invite different voices to think and share

What works?

- Collaboration with influential radio programmes
- Great talk-show hosts - open debate
- Asking questions to make people think
- Not giving answers, sharing perspectives
- Producing podcast and share

Hability to use technologie

#### **Lessons learned:**

What is challenging?

- Need to be careful about safety and security when addressing taboo topics
- Knowledge and skills to engage people on the radio in debate that opens minds
- After the radio programme, then what? End of debate at the moment.

#### **Next steps:**

1. Adolescents and young people from key populations are diverse and they want to listen to people who share similar experiences like them. They prefer short interesting and entertaining content. The iREADY Burundi podcasts were popular because they included topical issues that speak of daily realities of young people. The podcasts were made in Kirundi, were short and snappy and easy to disseminate via social media and WhatsApp.
2. Access to information is still a challenge - young people need information so that they can be better equipped with skills and knowledges.
3. There is still need to work collaboratively with the government and their partners so as to ensure the integration and implementation of comprehensive sexuality education as part of the national school curriculum using innovative information technologies such as podcasts.
4. Use of mixed platforms to engage young people and broader society in ongoing debate on taboo topics
5. Transforming radio shows into podcasts that can be used in support groups and community dialogues to generate debate and challenge attitudes.

## THPEC183

### **Ghana Key Population Unique Identification System (GKPUIS); A Mirage or a Reality?**

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**Issues:** The end term evaluation of the National HIV & AIDS Strategic Plan 2011 - 2015 highlighted significant gaps such as the inability to track Key Population (KP) on treatment and the services offered in clinical and non-clinical settings. The absence of an integrated platform that links community service delivery data to the clinical platform is a key contributor to the gap which prevents the tracking of KP across the HIV care continuum. In 2015, the Ghana AIDS Commission initiated the development of GKPUIS as a measure to enable the national response provide services and track KP on treatment. It is an integrated platform which generates Unique Identification Code (UIC), links community service delivery data to the clinical platform and records number of clients registered, KPs reached with services and on treatment. This paper examines the challenges and lessons learnt from institutionalizing the GKPUIS

**Descriptions:** The GKPUIS is a web based and mobile app which runs on a MSSQL platform and can be assessed by a laptop or an android mobile device. Log on is done by credentials allocated by a system administrator. The Unique Identifier system is a pseudo UIC based on first two characters of a client's first and last names, the month and year of birth, four randomly generated alphabets and the date of registration. Service data is entered based on standard reporting form. The system was initiated in October 2015 and was test run in 3 MSM sites and 2 FSW sites in February 2016. Findings from the test run revealed that innovative approaches are needed to sensitize the KP community to enhance user and client acceptability. System was upgraded in 2018 for institutions to access multiple projects using the same credentials. The system was launched and data entry initiated in May

**Lessons learned:** Participation of KP in the design, test run and roll out facilitate system use. A help desk portal to support users and frequently asked questions provides a shared learning experience. System and data flow design should be flexible and not a one size fits all. Availability of app on Google play store enhances access. The absence of official phones for KP peer educators remain a challenge

**Next steps:** Mobilize resources to secure tablets and laptops for IPs project team to ensure institutional memory and ownership, scale up training for all KP HIV implementing partners and full roll out of the system and linkage to the District Health Information Management System e-tracker

## THPEC184

### Recommendations for Introducing the Dapivirine Ring to Healthcare Workers: Findings from Seven Countries in Sub-Saharan Africa

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**Background:** The monthly dapivirine (DPV) vaginal ring has been developed to address the need for a long-acting, female-controlled HIV prevention method. Pending regulatory approval, we sought to understand whether the ring would be acceptable to healthcare workers (HCWs) to prescribe, what factors would support or hinder their prescription and promotion thereof, and what training they would require.

**Methods:** This study was conducted in Kenya, Malawi, Rwanda, South Africa, Tanzania, Uganda and Zimbabwe. We conducted 12 key informant interviews (KIIs) with policymakers, 101 KIIs with HCWs (doctors, pharmacists and nurses) and 20 focus group discussions with community health workers (CHWs) (n=127). Data were analysed using thematic content analysis.

**Results:** In most countries, but especially where DPV ring trials had not recently been conducted, awareness of the ring was low. Acceptability differed across countries and HCW cadre. Doctors and policymakers were concerned about perceived low efficacy whereas nurses and CHWs were more positive of the ring overall. Barriers preventing HCWs from promoting and prescribing the ring included lack of information on the DPV ring and concerns about whether it would be consistently available. HCWs reported that they would promote and prescribe the DPV ring if they had sufficient information themselves and if it were free to users. The ring being female-controlled is a key factor in HCWs' support. HCWs said all cadres should receive pre-service training on the DPV ring but the type of training would differ across cadres. Training strategies suggested for doctors and nurses included: insertion and removal demonstrations using an anatomical model, and role-plays. CHW training should focus on providing easy-to-understand factual information to dispel myths and build confidence in the ring at the community level.

**Conclusion and Recommendations:** If approved, the uptake and use of DPV the ring would be significantly influenced by how it is introduced and positioned to HCWs'. HCW training should include both theoretical and practical components. Behavioural insights such as framing and saliency bias should also be used in HCW sensitisation and training to address factors hindering the ring's promotion by HCWs. Health system issues such as supply chain and cost also need to be addressed and clearly communicated. An overall approach to introducing the DPV ring to HCWs is suggested, and country-specific issues should be addressed.



## **THPEC185**

### **The Online Free Condom Store - Game Changer Model for the Future to Condomize the World"**

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**Issues:** As per the National Family Health Survey, the use of condoms among married women increased by only 0.4 per cent. As per the Annual Report of NACO 20.90 crore condoms in 2015-16 which is 16% of the target. Globally India ranks third in terms of the number of estimated people living with HIV. Another failing reason for the uptake of condoms in India is the obsession for anonymity due to the stigma attached to condoms. Considering this AHF India launched the first of its kind online free condom store in April 2017.

**Descriptions:** A toll-free number 1800 102 8102 was instituted along with an email ID freecondomstoreahf@gmail.com. This helped people talk to a counsellor directly for all queries. To make an order one has to write to the email ID requesting for the number of condoms required. The person also had to agree that these were for personal use or for distribution and not for sale. Many civil society/ community-based organisations also placed order for condoms. The orders were processed, and random checks were made through phone calls to understand how genuine the order is. The boxes were packed to ensure that they do not like condom boxes and was delivered by courier as instructed in the order request.

**Lessons learned:** The online store witnessed individual orders from all states of India. After the launch within 69 days 1 million condoms were packed and sent. Till 2018, 2.6 million condoms have been dispatched through the free condom online store out of which 1 million was for individuals and 1.6 million for organisations. The condom store data shows that the organisations in Tamil Nadu and Delhi (states that have high HIV prevalence) have more demand for condoms. As far as individuals are concerned the maximum demand for condoms (103,824) have come from Delhi. After the launch around 2.64 million condoms have been distributed through the free condom online store. It was observed that the obsession for anonymity due to high stigma remains as emails clearly requests for confidentiality of identity.

**Next steps:** There is a dire need to address the stigma attached to condoms and increase supply of condoms to ensure the demand in India is met amicably

## THPEC186

### Leveraging the Healthy Living Platform to Enhance Key Populations Access to Comprehensive HIV Services

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**Issues:** Ghana has a low-level HIV epidemic (1.7%) prevalence with disproportionately high prevalence of HIV among key populations (KPs) such as female sex workers (FSW) (6.9%) and men who have sex with men (MSM) (18.1%). KPs face extreme stigma and discrimination resulting in social exclusion and low utilization of healthcare services. This makes it challenging to reach them with HIV related services. There is need to identify innovative strategies in reaching KPs with HIV services as previous intervention platforms have not been interactive and only used English language. This abstract presents evidence of a successful innovative approach in reaching KPs with HIV services in poor resource settings.

**Descriptions:** The Healthy Living Platform (HLP) is an interactive two-way system developed to transmit short message services (SMS) and interactive voice response (IVR) which are integrated with helpline counselling (HLC) via a three-digit short code (212). KPs who subscribe for text and voice messages also have access to professional counsellors who provide HIV, STI and ART counselling and referrals for follow-up services. The helpline counselors are nurses who provide private, confidential phone counselling to KPs as an entry point to the HIV care continuum. The platform contains three campaigns (It's My Life, It's My Turn, I'm Someone's Hope) in four local languages (Twi, Ewe, Ga and Hausa) and in English.

**Lessons learned:** Between August 2018 when the platform was launched to July 2019, 14,718 KPs between the ages of 15-75 years subscribed and accessed various messages. Out the number, 1,677 contacted counselors on the platform. There were a total of 112,479 interactions of which 27,666 were from IVR; 82,700 were Unstructured Supplementary Service Data (USSD); and 2,113 were interactions with counselors. The platform has also sent out 347,182 campaign messages to KPs. Reaching HLCs is easier for KPs than direct dialing 10-digit personal numbers and also allows for reaching discrete KPs missed out by peer education.

**Next steps:** The HLP effectively meets the HIV related needs of KPs. This system of reaching KPs has the potential to eliminate both structural and individual level barriers including stigma and discrimination and fear of breach of confidentiality. The client feedback mechanism helped to improve the HLC content and the unmet needs of KP sub-groups. There is the need for wider evaluation to generate evidence for scale up.

## THPEC187

### Transitions among Women Engaging in High Risk Sexual Behaviors in High Risk Settings in Urban Areas in FCT-Nigeria: Implication for HIV Prevention

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**Background:** Targeted preventive interventions generally reach women after they self-identify as sex workers. In high risk settings, women tend to engage in risk behaviors before transitioning to Female Sex Workers (FSWs) with high risk behaviors. Studies hardly explored transitions of women from lower to higher risk behaviors (casual-transactional-commercial sex). Since information on transition has significant implications for HIV prevention programs, this study examines the transitions of women in high risk settings of Federal Capital Territory (FCT), Nigeria to improve the HIV interventions.

**Methods:** A Cross-sectional study was conducted among three groups of women: women in casual sexual practices, transactional sex and commercial sex. Sampling frame for the study was the list of hotspots from the mapping conducted in 2012 in FCT. Respondents were selected following a two-stage sampling with hotspots in first stage (105 hotspots) and respondents from the selected hotspots in the second stage. Structured questionnaire was administered after obtaining informed consent. Data were entered in CPro and analysis was conducted using SPSS 22.0.

**Results:** 464 FSWs, 198 and 226 women respectively in transactional and casual sexual practices participated in the study with mean age 18years. A Significant proportion of women in high risk behaviors transitioned from a lower risk (casual-transactional-commercial sex). About 49% of FSWs transitioned from transactional to commercial sex, whereas 52% of women in transactional sex transitioned from casual sex practices to transactional sex with a large proportion of transitions taken place in the first year (39% FSWs and 52% transactional group). About 53% FSWs expected cash prior to the first time they ever received cash. Similarly, 58% and 48% respectively of FSWs and transactional women ever expected gifts/goods/materials before receiving it.

**Conclusions and Recommendations:** Women in high risk hotspots transitions from lower risk and the transition period is very short. Moreover, large number of women in lower risk group (casual or transactional sex) attends the hotspots frequent by sex workers and engage in risk behaviors. Therefore, it is essential program reach lower risk women in the hotspots as early as possible before they engage in high risk behaviors. Further, strengthening the present program strategies of peer education approach by incorporating this groups (women engaged in casual or transactional sex) in its program delivery would address early transmission of HIV.

## THPEC188

### Street Distribution Points Increase Condom Uptake in HIV Hotspots in Rwanda

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**Issues:** Despite the substantial progress made in HIV testing and access to treatment in the last years, new infections continue to fuel the HIV epidemic. Along with the preventive effect of the Treat-all strategy, PMTCT and male circumcision programs, condom use is critical to drastically reduce new infections. Data from health surveys in Rwanda shows that condom use is low in individuals with multiple sexual partners and in Female sex workers (FSW). Here we describe an intervention carried out by the AIDS Healthcare Foundation (AHF) in Rwanda to increase condom access and reduce new infections in "hotspot" areas.

**Descriptions:** A mapping of Kigali and three other towns in Rwanda with high HIV prevalence identified eight hotspots along areas of street sex work. An assessment of condom availability in those areas showed that existing condom dispensers were located in premises where FSW and mobile populations have limited access. To address this gap, condom "kiosks" located in the street and open 24/7 were set up in all eight areas. The kiosks had permanent staff -trained in HIV prevention- that routinely collected anonymous demographic data, counseled the clients in condom use and dispensed condoms free of charge.

**Lessons learned:** From January to December 2018 more than 1.7 million condoms were distributed through the eight kiosks (averaging over 17,000 per site/month) representing roughly half of the total distributed by AHF in Rwanda in the referred period. Demographic data showed that in 72% of the total pick up encounters clients were men, 69% had between 18-30 years of age and 41% have attended secondary education. On self-reported occupation, data collected in 2017 from three sites (over 80,000 pickups) found that 37% were sex workers, 21% civil servants and small business owners and 17% vehicle mechanics or drivers.

**Next steps:** The high uptake achieved with the street kiosk initiative highlights the existing demand for free, 100% accessible condoms in urban hotspots, especially in areas of commercial sex work. Additionally, the brief counseling session given to each client became a good opportunity to educate on correct condom use and inform clients about other services like HIV testing. Low access of non-FSW women to the kiosks and minor security incidents at night were identified as challenges. Concerns about potential reluctance from clients to access condoms in a completely public and open setting were not confirmed.

## THPEC189

### Understanding Sexual Networks Developed by Sex Workers within Hotspots in Abuja: Implications for HIV Interventions

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**Background:** An ethnography study was conducted to explore and describe the environmental context of sex work, particularly the organization of the sex trade industry in Abuja and the social dynamics and power relationships that play out at various hotspots where sex workers congregate to meet clients and have sex.

**Methods:** Participant observation and the composition of ethnographic field notes were conducted by 10 community researchers from the sex work community in various hotspots in 3 zones containing more than 45 purposive sampled venues located in Abuja. Community researchers built rapport with and conducted qualitative in-depth qualitative interviews (IDI) with regular venue patrons (women selling sex, partners of sex workers, and key venue staff members). Data was transcribed first and later analysed using Nvivo Software.

**Results:** Participants recruited for interviews ranged from 18 to 32 years of age. Socio-environmental perspective offered by the field notes and IDI from 25 males and 25 females depicts sex work as a complex web of social and power relations mediated by a range of key people including bar staff, security guards, taxi drivers, and police. Bar staff are important players in the sex trade who provide vital financial and security "services", so to speak, for these women. Noted in the transcripts is how many of the interactions between these women and their clients overlap with social relationships, suggesting that these interactions cannot be entirely characterized as commercial relationships, instead more resemble transactional sexual relationships. Included with the many forms of compensated sex these women have with the key players suggest that there are extensive and densely overlapping sexual networks reinforced by social relationships, material and emotional reciprocities, and relations of obligation.

**Conclusions and Recommendations:** Intervention programs must confront a complex web of social relations and power arrangements rather than merely "at risk individuals" practicing safer sex (or not) according to their knowledge of HIV. Further research is required to understand the extent to which these networks foster challenges for using condoms and might contribute to HIV transmission dynamics.

## THPEC190

### Impact Analysis: Evaluation of BMZ SKILLZ GIRLS Project Implemented in Four States in Nigeria

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**Issues:** BMZ SKILLZ Girl was a project designed to empower 2000 disadvantaged adolescent girls, aged 13-18 years in 4 States in Nigeria namely Lagos, Akwa Ibom, Ogun and Abuja, with knowledge on sexual and reproductive health, life and leadership skills and physical well-being, to enable them transit into adulthood and achieve their full potentials as productive members of their community. This study was conducted to assess the effectiveness of the project in improving positive gender attitudes, SRH knowledge, and use of HIV testing services (HTS).

**Descriptions:** Secondary analysis was also conducted and these data were used to supplement findings. An After Action Review meeting with project implementers was used to document and jointly assess the strategies used in the implementation of the project. Twenty in-depth interviews were held with YEDI project team, teachers, Government officials in the four implementing states.

**Lessons learned:** The project benefitted 2002 participants, 478 participants were tested for HIV, 473 were non-reactive, and 5 were reactive and referred. Percent Change averages cutting across project indicated positive impact among participants.

Outcomes;

1. 112% increased access to health services
2. 68% reduced age-desperate sex
3. 18% increased delayed sexual debut
4. 25% increased gender equitable norms
5. 109% decreased HIV stigmatisation
6. 60% increased confidence to test for HIV
7. 46% increased knowledge on HIV Transmission
8. 43% increased knowledge on reproductive health

The stakeholders observed an increased level of knowledge in adolescents. They observed that those who participated in the project exhibited greater self-awareness, higher self-confidence, and a better appreciation of healthy behaviours in relationships. Across the states, school authorities observed a decrease in teenage pregnancies incidences in schools compared with the same period in previous years. A key evidence of behaviour change among the girls was that they all sought to teach others the new knowledge they had acquired.

**Next steps:** The evaluation therefore concludes that there are notable successes with the project in terms of impact on behavioural changes in the lives of the direct and indirect beneficiaries while increasing their level of knowledge about sexuality and HIV generally. Stakeholders recommended expanding the implementation in other underserved rural LGAs including implementation of SKILLZ Guyz to complement impact in the communities.

## **THPEC192**

### **L'Animation des Médias Sociaux sur la Santé et les Droits Sexuels à l'Endroit des Professionnels de Sexe et des LGBTI des Zones Rurales au Togo**

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**Questions:** Les sensibilisations de masse traditionnelles ne sont pas encore applicables pour les populations clés. Les activités ne touchent que les LGBTI qui fréquentent les associations ou les activités de routine. Les professionnels de sexe et LGBTI vivants dans les zones rurales, parfois clandestins, sont moins informés sur leurs droits, la santé sexuelle. Quelle stratégie nouvelle afin de les informer et construire un mouvement plus fort?

**Description:** Des pairs éducateurs sont formés pour animer ces réseaux. Ils se connectent régulièrement, s'affilient à différents réseaux existants, en crée de nouveaux, pour discuter, sur différents thématiques (Violence basée sur le genre, féminisme, discrimination et stigmatisation, estime de soi etc.) puis invite à assister à des séances physiques.

**Leçons Apprises:** 478 LGBTI et professionnels de sexe touchés au cours de l'année 2018. 104 reçoivent des visites et participent à des rencontres dans lequel nous pouvons discuter et, créer et mettre en corrélation des stratégies éclairées par des expériences de mouvement national, et régional. 308 d'entre eux ont été dépistés et 31 sont aujourd'hui sous ARV.

**Prochaines Étapes:** Élargir cette activité à d'autres zones rurales et péri urbaines. Promouvoir cette activité comme bonne pratique en matière de renforcement de mouvements LGBTI, faciliter l'accès aux services de santé et de prise en charge des LGBTI du Togo et dans la sous-région

## THPEC193

### **Stratégie de Dépistage en Zone Périphérique pour Atteindre les Populations Vulnérables Difficiles d'Accès et Contribuer à la Réalisation du 1<sup>er</sup> 90: Cas de l'Etude Test and Treat (TNT) en Casamance** Sambou Benjamin Amaye<sup>1</sup>, Diouf Boubacar<sup>1</sup>, Cisse Ousseynou<sup>2</sup>, Gueye Maimouna<sup>3</sup>

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**Contexte:** En vue d'atteindre les objectifs des 90-90-90, le Sénégal a donné la priorité aux populations clés dans sa riposte au VIH. Cependant, pour réussir, il faudra adopter des approches novatrices en matière de dépistage, surtout dans des zones périphériques comme la Casamance, qui est la partie du pays la plus touchée par le VIH. Ainsi dans le cadre de l'étude TNT, mise en œuvre par Enda Santé depuis 2016 en Casamance, des kits d'autotest VIH ont été distribués aux populations clés et leurs partenaires cachés, qui constituent des groupes difficiles à atteindre et souvent oubliés dans les programmes existants de sensibilisation et de dépistage.

**Description:** Les kits d'autotests VIH sont distribués suivant deux approches :

- L'approche basée sur le réseau : les kits d'auto-dépistage sont remis aux leaders des populations clés qui fournissent à chaque pair 3 kits, dont un pour lui-même et deux à redistribuer à ses partenaires sexuels, ou amis.
- L'approche basée sur lieu : des pairs éducateurs formés, distribuent les kits dans des points chauds cartographiés au préalable.

Des kits sont également distribués dans les sites de prise en charge des population clés et de PTME.

**Résultats:** - 74,8% des individus ont déclaré, lors du post test s'être dépister ; ce qui atteste d'une assez bonne acceptabilité des autotests.

- La distribution des autotests dans les points chauds est une stratégie efficace pour dépister les TS/C, MSM et leurs partenaires cachés, difficiles à toucher. En effet, 60,7% des kits ont été remis à des CR/PA ou hommes trouvé dans ces sites, contre 39,3% pour les PS/C.
- Seulement 10 des 19 individus réactifs ont accepté de faire la confirmation dans les structures de prise en charge.

**Conclusion et Recommandation:** La vulgarisation de l'autotest du dépistage VIH en zone périphérique, apparait comme un moyen efficace pour augmenter le taux de dépistage chez les populations à risque difficiles d'accès et pour lesquelles un dépistage régulier est recommandé. Pour réussir il faudrait accentuer les campagnes de sensibilisation sur les avantages de l'autotests VIH de sorte à les faire accepter par ces groupes.

Il faudrait aussi prendre des mesures incitatives pour encourager les individus réactifs à faire la confirmation. Il est aussi nécessaire d'impliquer dans tout le processus les leaders des populations clés pour faciliter l'accès à leur pair et éviter les blocages.

**Mots clés:** Kit autotest VIH, populations clés, points chauds, zone périphérique



## THPEC194

### **The Impact of Social-to-Health Strategy in HIV/AIDS Prevention Service amongst the Adolescent Girls and Young Women (AGYW) in Oyo State South-West Nigeria**

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**Issues:** The Adolescent and Young People represent a growing share of people living with HIV worldwide. In 2016 alone, 610,000 young people between the ages of 15 to 24 were newly infected with HIV, of whom 260,000 were adolescents between the ages of 15 to 19. If current trends continue, hundreds of thousands more will become HIV positive in the coming years. Additionally, AIDS-related deaths among adolescents have increased over the past decade while decreasing among all other age groups. (UNICEF, 2018)

**Programme description:** Supported by the Global Fund, SFH partnered with SDAs/CBOs to reduce prevalence of HIV/AIDS, expand access to RH/HIV/STI prevention among Adolescents using Social to Health (S2H) Approach. The approach was employed during the intervention for the Adolescent Girls and Young Women AGYW from May, 2018 to June 2019 across 16 LGAs of Oyo State. The intervention focused particularly on AGYW between ages 15-24years. They were profiled into 4 categories using: socio-demographics characteristics, sexual lifestyle and sexual patterns; Adolescent girls between ages 15-19years, Young women 20-24years, Girls at high risk based on occupation and lifestyle and Adolescent Girls and Young Women Living with HIV. The method helps in sharing of information and service uptake with other non-health related activity this helps in reducing stigma and increase their participation in HIV activities.

**Lesson learned:** The approach an innovative method used to reach all categories of AGYW with behavioral and biomedical mix of the combination prevention. The method gives room for social interaction among AGYWs by starting a social activity of their choice which was led by a social instructor. e.g. Beauty make-over, Beads making, Soap Making, Hair Dressing, and Barbing. This paved way to reach the High/Higher risk Adolescent Girls and young Women (AGYW) who are vulnerable to HIV using different technical approaches that can best achieve a behavioral change, uptake of several biomedical services and linkage to services. A total of 9,224 AGYW were reached with behavioral activities while 7,241 AGYW were reached with HIV testing services. 164 were reactive and linked to care and treatment.

**Recommendation:** The S2H method serves as a strategy for the adolescent to be involved in the HIV programs and also helps in providing livelihood skills for some of them in the community. This will also help in curbing the spread of HIV among the AGYW target group.

## THPEC195

### **iKnow Musical Concerts; Extending HIV/AIDS Awareness & Prevention and FP Services for Young People in Rural Uganda**

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**Issues:** The HIV/AIDS epidemic remains a primary public health concern affecting Uganda's youthful population aged 18 to 35. Though prevalence rates decreased by 1.3% between 2011 and 2017, 50,000 new infections are registered annually. With just a year left to achieve the 90-90-90 target by UNAIDS, only 51% of adults aged from 15 to 49 have taken an HIV test in the past 12 months and know their serostatus. Estimations of HIV positive adults on ART and national population level viral load suppression are at 57% and 60% respectively. This calls for more innovations and interventions for HIV awareness and prevention.

**Description:** Reach A Hand Uganda (RAHU) is contributing to the UNADS 90-90-90 targets through the iKnow HIV/AIDS Awareness campaign. The campaign uses musical concerts, peer educators and cultural icons to spread HIV/AIDS awareness and prevention information and encourage young people (in and out of school) to know their HIV serostatus. It reduces the stigmatization of HIV positive people and increases access to testing facilities, care, and information. The iKnow campaign integrates Family Planning and other sexual reproductive health rights (SRHR) services needed by young people.

**Lessons learned:** Music concert(s) is an effective tool in engaging young people with HIV prevention information and services.

A collaborative approach is crucial in increasing HIV prevention awareness initiatives.

Integrated outreaches (that includes; FP, HIV, & other services) bring value as young people's SHRH issues are diverse.

Community health drives help communities access quality and affordable SRHR services

It's difficult to engage and follow up on a large number of young people who attend the concerts.

**Next steps:** Investing more in research and data collection to enforce evidence-based interventions and targeted testing (For Most At-Risk Populations) for proper utilization of resources

Integration of HIV with economic empowerment interventions

Strengthening our partnerships with corporate programs

## THPEC196

### Community Driven Innovative Testing Strategies for Reaching High Risk Men who Have Sex with Men (MSM) in Ghana

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**Issues:** Ghana faces persistent programmatic challenges in reaching the most at risk and closeted MSM who are living with HIV. Factors such as misconceptions about HIV, fear of contagion and high levels of stigma and discrimination against MSM affect HIV positivity rate among hard to reach MSM. Identifying new MSM HIV positives require using innovative approaches to reach different segments of MSM who engage in risky sexual behavior.

**Descriptions:** Conventional large group outreaches at fixed venues that produced high testing rates but low HIV positive yield were halted and replaced with flexible community based strategies and cross-cutting initiatives through segmentation of MSM according to their risk behaviors and linking them to an appropriate testing strategy. These subgroups include MSM and their partners, 'virtual' MSM, MSM sex workers, 'high class' MSM (e.g. Lawyers), MSM drug users, etc.

Peer Educators and nurses used peer-driven and multiple innovative testing approaches to reach different high-risk MSM positives in different networks:

- (1) Social media platforms (Facebook, Grinder, dating apps) were used to reach and engage peers on social networks for HTS;
- (2) HIV Testing took place at homes and/locations identified by and agreed to by peers at their own convenience;
- (3) Nurses and case managers encouraged MSM who had been initiated on ART to introduce their recent sexual partners to HTS;
- (4) Testing were conducted within a flexible schedule, using more daytime interventions than the predominantly large-group evening outreach interventions.

**Lessons learned:** Trends from programmatic data indicates that HIV positive yield among MSM increased across the three districts after the introduction of innovative testing strategies to reaching high risk MSM. Between January and June, 2018, 463 were tested using the conventional large group outreach at fixed venues; 31 MSM (6.7% HIV+ yield) were diagnosed positive across the three districts. After the introduction of innovative testing interventions, between July and November 2018, 313 MSM were tested and 68 MSM (21.7% HIV+ yield) were diagnosed HIV positive across the 3 districts.

**Next steps:** Concept of innovative strategies to HIV testing through peer-driven approaches is effective and efficient to reach out to closeted MSM and should be implemented in other districts.

CSOs can adopt multiple tailored and flexible approaches to improve results in reaching, testing and linking MSM who are most at risk.

## THPEC197

### Dépistage des Nouvelles Infections à VIH/Sida à Travers l'Approche Intrafamilial: Cas de l'ONG Mieux Vivre avec le Sida (MVS) au Niger

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**Contexte:** Créée en 1994, MVS, est une association de prise en charge globale des communautés en matière des IST/VIH/SIDA. Elle dispose d'un centre de dépistage qui réalise plus de 2000 tests/an avec une prévalence de plus de 10% nettement supérieure à la moyenne nationale qui est de 0,4%. Au Niger, moins de 6% des personnes âgées de 15-49 ans connaissent leur statut sérologique (SSG, 2015). Pour l'atteinte de l'objectif fixé par l'ONUSIDA consistant à dépister 90% des personnes vivant avec le VIH/Sida, il y a lieu d'opter pour des stratégies innovantes. Ainsi, avec l'appui de la Fondation de France, MVS a mis en œuvre en 2018, la stratégie de dépistage intrafamilial permettant de toucher efficacement les nouvelles infections à VIH/Sida.

**Objectifs:** Améliorer la communication entre partenaires infectés/affectés par le VIH pour un partage sérologique entre partenaires sexuels et autres membres de la famille pour réduire la transmission du VIH et améliorer la prise en charge des personnes séropositives.

**Méthodologie:** La stratégie de dépistage adoptée repose sur "l'approche intrafamiliale" qui considère les patients connaissant déjà leur statut séropositif (clients index) comme moteur du projet. Chaque client index est sensibilisé pour partager son statut avec les membres de sa famille qu'il est sollicité à sensibiliser et mobiliser pour le dépistage. Cela a nécessité la formation de 15 acteurs communautaires en techniques et stratégies de communication avec les clients index. Ces derniers reçoivent des tickets de dépistage à remettre aux membres de leurs familles ayant accepté de se faire dépister. Les frais de déplacement des personnes mobilisées au dépistage sont pris en charge par MVS. Une prime de motivation est aussi donnée à chaque acteur communautaire pour chaque personne mobilisée par les clients index.

**Résultats:** Au total, 81 clients index dont 54 femmes ont partagé leurs sérologies à leurs partenaires sexuels ou autres membres de la famille et ont mobilisé 123 personnes dont 85 femmes au dépistage. Il a été enregistré 25 cas positifs dont 19 femmes, soit une prévalence moyenne de 20,3%. Suivant le sexe, la prévalence reste plus élevée chez les femmes (22,4%) que chez les hommes (15,8%).

**Prochaines étapes:** Reconduction du projet sur 2 ans et partage des résultats aux responsables en charge de la lutte contre le sida au Niger pour une appropriation de la stratégie et son passage à l'échelle dans le souci d'accélérer l'atteinte du 1er objectif des 3 x 90.

## THPEC198

### Development of a Sustainability Transition Implementation Plan for the Voluntary Medical Male Circumcision Program in Zimbabwe, 2018

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**Background:** Zimbabwe has been implementing the VMMC programme since 2009 after adopting it in 2007 as part of a combination of HIV prevention interventions. The programme was set up to follow three critical phases that were outlined to shape the long term strategy required to ensure effective impact. These are the Preparatory phase, Scale up phase and the Sustainability phase which ideally results in cost-effective, integrated, routine VMMC services. We therefore sought to determine the key enablers and barriers to sustaining the programme in Zimbabwe.

**Methods:** Qualitative data were collected using interviewer administered questionnaires at national and sub-national level. Ministry of Health senior management, Provincial and District Health Executives were included in the interviews to identify key enablers and barriers to sustainable VMMC programming. Data were grouped into thematic pillars focusing on management and coordination, demand generation, service delivery, strategic information and program quality.

**Results:** An integrated approach with active involvement and leadership by the MOHCC at all levels was identified as a general theme across all management levels. Enablers of sustainability were; building capacity of school health masters to create demand for adolescent circumcision; incorporating community health workers in the creation of demand. Key barriers identified were the use of cost reimbursement or incentives for both service delivery and demand creation cadres; the programme is currently vertical, with little or no integration; Inconsistent implementation models; payment of incentives that goes directly to individual health workers

**Conclusions and Recommendations:** Ownership of the VMMC programme by the MOHCC is critical for sustainability. A phased approach to sustainability is required as districts are transitioning at different times, thus a combination of scale up and sustainability strategies is necessary. Key enablers must be scaled up to all districts.

## THPEC199

### Offre de Service de Prévention du VIH en Faveur des Personnes Transgenres à Yaoundé et Douala: Cas d'Affirmative Action

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**Problème Étudié:** Le Cameroun est fortement touché par le VIH et le SIDA, avec une prévalence de 3,8% (PSN 2018-2022) dans la population générale. Les Transgenres figurent parmi les populations exposées au risque d'infection à VIH dans le monde (Rapport ONUSIDA 2015) or les stratégies et politiques sur les Transgenres qui sont mises en œuvre pour assurer leur accès aux services de prévention et de soins sont limitées. C'est donc fort de ce constat qu'Affirmative-Action dans le cadre du projet Fonds Mondial de lutte contre le VIH va implémenter des stratégies pour atteindre la cible.

**Question de Recherche:** Comment comprendre les besoins spécifiques en matière de prévention de la cible Transgenre et y apporter des réponses efficaces?

**Méthodes:** 1.L'organisation des focus group pour le recensement des besoins en matière de prévention des Transgenres et l'analyse de l'offre de service existante. 2. Le Recrutement et la formation des acteurs identitaires issus de 02 Organisations à Base Communautaire (OBC) Transgenre.

3.La mise en œuvre des activités de prévention spécifiques à la cible notamment : la journée internationale de la visibilité des personnes Transgenre qui se célèbre les 31 mars, 08 mars TRANS pour la journée de la femme.

4.La mise en œuvre des activités de prévention en stratégie avancée spécifique pour toucher les Hard to Reach notamment les descentes dans les grains, cyber sensibilisation etc.,

**Résultats:** -04 activités spécifiques (l'organisation des causeries éducatives, la promotion de l'offre de services, de dépistage volontaire du VIH et la prise en charge syndromique des IST ; -447 nouvelles personnes Transgenres touchées ;

-49 causeries éducatives organisées sur des thématiques de prévention en direction des Transgenres ;

-106558 préservatifs masculins et gels lubrifiants distribués.

**Conclusions et Recommandations:** L'engagement primaire d'Affirmative Action depuis 2008 s'explique par le contexte d'extrême homophobie qui règne au Cameroun et s'appuie sur les lois qui pénalisent les rapports sexuels entre personnes du même sexe, cet état des faits augmente la vulnérabilité aux IST/VIH des personnes qui les pratique. Cependant, l'offre de service de prévention en direction de ces cibles reste encore classique et insuffisante d'où notre volonté à contribuer à l'atteinte des objectifs 90-90-90 édicté par l'ONUSIDA. En terme de recommandation, il faudra augmenter la zone de couverture géographique de nos activités en faveur des Transgenres au Cameroun.

## **THPEC200**

### **The Big Sister-young Sister Mentorship Approach to HIV Prevention: A Case of Adolescent Girls and Young Women in Mutare District Schools of Manicaland Province, Zimbabwe**

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**Issues:** The power and impact of mentorship in HIV prevention among adolescent girls and young women remains unexplored and untapped in Zimbabwe yet the country remains home to child marriage and high new infections among adolescent girls. Adolescent girls and young women's access to comprehensive sexuality education and services remains compromised in the secondary schools in Mutare District (home to the Johanne Marange Apostolic religious sect which practices child marriages).

**Descriptions:** Through its Big Sister Young Sister Initiative, SAYWHAT facilitates for mentorship, capacity building and leadership skills development of female students in order to advance advocacy and influence meaningful decisions on the Sexual and Reproductive Health and Rights of adolescent girls and young women. The initiative is spearheaded by trained Big Sisters who are female students (19-24 years) in teacher training colleges who are on Teaching Practice at local Secondary Schools. They provide mentorship and leadership to young girls (Young Sisters: 15-19 years) in the Secondary Schools on key Sexual and Reproductive Health and Rights issues affecting them. The 'Big Sister' support include providing SRH information, peer education, mentorship, counselling and SRH referral services to the Young Sisters. Twenty five Big Sisters were trained in June 2017, formed 25 Young Sister Clubs of 10 adolescent girls each and mentored a total of 250 adolescent girls in 10 schools in Mutare District by December 2018. The project started in March 2017 and is still ongoing.

**Lessons learned:** Same sex mentorship is a powerful tool in scaling up access to HIV prevention services among adolescent girls. It empowers adolescent girls to open up on issues of sexual abuse and HIV positivity and it enables them to take positive steps for a healthier future. Big Sisters referred 721 adolescent girls for HIV testing and counselling; 412 adolescent girls accessed the service at local health facilities; 26 adolescent girls disclosed their HIV status; 3 Support Groups were formed in 3 schools with the support from the Big Sisters; and an Anti-Child Marriage petition was developed by mentored Young Sisters.

**Next steps:** Scale up use of the Big Sister-Young Sister Mentorship Approach to more schools in Mutare District and advocate the adoption of the Big Sister-Young Sister Mentorship Approach in the secondary schools HIV and AIDS curriculum.

## THPEC201

### Utilization of mHealth Technology to Optimize Adolescent Girl and Young Women Engagement along the HIV Prevention and Care Continuum in Homa Bay, Kenya (GIRLS Study)

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**Background:** The 2018 Kenya HIV Estimates report that adolescent girls and young women (AGYW) 15-24 years old made up a third of all new HIV infections. We piloted short message service (SMS) and unstructured supplementary service data (USSD) technology to optimize engagement in the HIV prevention and care continuum for high-risk negative and newly diagnosed HIV+ AGYW.

**Methods:** AGYW newly diagnosed as HIV+ received either standard referral, standard referral and SMS message, SMS message or transport fare reimbursement (USD4.00) to facilitate linkage to care. An intervention to support retention in care involved medication adherence and treatment support messages, along with health status surveys at 3, 6, 9, and 12 months. A subset of high-risk negatives received a health promotion and prevention messaging intervention, combined with surveys at 6 and 12 months to assess their HIV risk behaviors. We assessed the feasibility of SMS and USSD technology to engage AGYW with HIV prevention, care and treatment messaging as appropriate.

**Results:** A total of 1198 AGYW were enrolled, with 32 participants enrolled in the HIV+ cohort and 184 in the high-risk HIV- cohort. In the HIV-positive cohort, 21 successfully linked to care and engaged in the retention in care intervention. Sixteen (76.2%) HIV+ cohort participants and 163 (88.6%) high-risk cohort participants completed the final study visit. Two participants out of 149 (1.3%) in the high-risk cohort tested HIV+ at 12 months. Among HIV+ AGYW who completed the final study visit, 43.8% (7/16) liked the message frequency, and 68.8% (11/16) completed all four surveys over the one-year follow-up period. Among high risk AGYW in the high-risk cohort, 41.7% (68/163) liked the message frequency, and 44.8% (73/163) completed the two follow-up surveys

**Conclusions and Recommendations:** Preliminary findings indicate that mobile phone interventions are effective in reaching AGYW and delivering health information in a youth friendly manner to support behavior change. However, loss to follow-up continues to be a concern for this population. Lessons learned will determine best strategies to support AGYW along the HIV prevention and care continuum.



## THPEC202

### **Willingness of Female Sex Workers to Participate in Future HIV Vaccine Efficacy Trials in Uganda**

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**Background:** To date, early phase clinical trials of HIV-1 vaccine candidates have shown acceptable safety profiles and since the RV144 trial which showed modest efficacy, improved vaccine regimens are being tested. It is anticipated that future HIV vaccine candidates will go into large efficacy trials involving suitable populations. We assessed willingness to participate in future HIV vaccine trials among female sex workers (FSWs) in Kampala Uganda.

**Methods:** We conducted a case control study among HIV negative women attending the Good Health for Women Project (GHWP) clinic that provides HIV prevention services for FSWs in Kampala. Cases received health services and were also enrolled in a 12-month simulated vaccine efficacy trial (SiVET) that used Hepatitis B vaccine as a proxy for an HIV vaccine. SiVET participants went through vaccine trial procedures including vaccination, reactogenicity assessments, frequent study visits and blood draws as would be in a real HIV vaccine trial. Controls received the clinic health services but did not enroll in SiVET. Cases and controls were matched for age and duration in the GHWP cohort in ratio 2:1. We described a hypothetical HIV vaccine trial to both cases and controls including vaccine trial attributes such as randomization (vaccine vs placebo), frequency of study visits and blood draws and vaccine induced seropositivity (VISP). We compared WTP among cases and controls using chi-squared tests.

**Results:** We analysed data for 219 cases and 92 controls. Cases and controls did not differ by baseline socio-demographic characteristics however 85% cases vs 64% controls had lived in the community for >1 year ( $p < 0.001$ ). Overall, 89% of women expressed WTP in an HIV vaccine trial designed as SiVET and  $\geq 90\%$  showed WTP for the vaccine trial attributes. We did not observe a significant difference in WTP between cases (89%) and controls (90%) ( $p = 0.736$ ). The most common reason for willingness across both groups was hope of protection against HIV. VISP as a reason for non-willingness was higher among cases (25%) than controls (12.5%) but the difference was not significant ( $p = 0.646$ ).

**Conclusions and Recommendations:** WTP in future HIV vaccine trials and acceptability of the vaccine trial attributes was high, and this did not vary by previous trial experience. Future trials will get high volunteer willingness from existing research clinics with regular volunteer follow up or pre-trial cohorts.

## THPEC203

### Facteurs de Risque Associés à l'Infection du VIH Chez les Hommes Ayant des Rapports Sexuels avec des Hommes. Cas des Hommes en Uniforme à Kinshasa

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#### Indiquer le problème étudié, la question de recherche

Quels sont les facteurs associés à l'infection du VIH chez les HSH/HU

**Méthodes:** Il s'agit d'une étude transversale analytique conduite d'octobre 2017 au mois de mars 2018 (soit une période de 6 mois) à Kinshasa dans les Zone de Santé (ZS) militaire et policière auprès des HSH/HU consentant. Nous avons opté pour l'échantillonnage non probabiliste, les enquêtés ont été recrutés par la technique de boule de neige et interviewés à l'aide d'un questionnaire préétabli avec proposition de dépistage volontaire au VIH par Elisa.

**Résultats:** Au total, 100 HSH/HU ont été recrutés au cours de l'étude. Les analyses biologiques réalisées ont permis d'obtenir une prévalence du VIH à 11% au sein de l'échantillon. Les enquêtés avaient un âge moyen de 34,14±7,86 ans (20-59), sans partenaire sexuel stable (83%), actifs comme HSH (41%) et bisexuels à 24%. Sur l'ensemble de l'échantillon 46% avait en moyenne 3,17±2,047 partenaires sexuels masculins au cours du mois. L'âge moyen de premier rapport sexuel anal (RSA) était de 23,74±8,87. Seul 41% utilisait toujours les préservatifs lors de rapport sexuel anal et sur le 81% qui connaissait le gel aqueux, seul 46% l'avait utilisé au cours du dernier RSA.

Cette étude nous a permis d'identifier les facteurs explicatifs de la sérologie élevée du VIH (11%) chez les HSH/HU à Kinshasa statistiquement significatifs; le fait d'appartenir aux FARDC rendait 9 fois plus susceptible exposé à être VIH + que le policiers VIH que la PNC, OR : 9,20, IC à 95% : [2,23-37,95] ; p = 0,001], le but ou la motivation de RSA chez les HSH/HU [OR : 0,24, IC à 95% : [0,06-0,90] ; p = 0,040] , le harcèlement et le viol au fait de son identité HSH/HU [OR : 6,82, IC à 95% : [1,67-27,80] ; p = 0,005].

**Conclusions et Recommandations:** Cette étude a montré une sérologie à VIH élevée parmi les HSH/HU et elle recommande aux autorités à tous les niveaux de rendre disponible des préservatifs et lubrifiants aqueux simultanément.

Encourager la pratique de la prévention combinée ou prévention positive : la prophylaxie orale pré-expositionnelle (PREP) au VIH et la prophylaxie poste expositionnelle (PEP)

De réaliser les activités d'information, de sensibilisation et d'éducation sur le changement de comportement et des pratiques sexuelles auprès des HSH.

Renforcer les mesures de prévention des IST/VIH/SIDA auprès des HU et HSH avec un message spécifique sur les comportements sexuels.

## THPEC204

### **Addressing Adolescent Boys' Unique Sexual and Reproductive Health Needs in Nigeria: Findings from a Sport-based Programme Evaluation**

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**Issues:** Grassroot Soccer (GRS) and Youth Empowerment Development Initiative (YEDI) developed SKILLZ Guyz (SG), an 11-session, sport-based intervention for AB ages 13-19 to respond to these needs. Facilitated by young male mentors (Coaches), SG aims to build the assets of AB - SRH knowledge; improve access to health services; and promote adherence to healthy behaviours. A mixed-methods evaluation was conducted aiming to: a) assess participant knowledge, attitudes, and beliefs related to SRH, HIV, gender equity, and positive identity formation; b) assess and compare effectiveness of the programme among in-school (IS) and out-of-school (OS) adolescents

**Descriptions:** SKILLZ Guyz participants were drawn from four schools and one residential facility for out-of-school adolescents. A quantitative survey was administered to participants (n=258, mean age 14.8 years; in-school n=140, out-of-school n=118) before and after the intervention. Quantitative data were analyzed using SPSS: descriptive statistics were calculated, scale variables were constructed, Cronbach's Alpha was calculated for each attitudinal scale, and significance was assessed using t-tests. Qualitative focus group discussions (n=2, 20 total participants) were conducted with SG Coaches, and interviews were conducted with YEDI program staff (n=8). Recordings were transcribed, translated, and analyzed thematically

**Lessons learned:** SG participants reported high levels of violence perpetration against female partners: at baseline more than 75% of participants reported ever having perpetrated at least one type of psychological violence, and 68.2% reported ever having committed at least one act of physical violence. Significant improvements were noted in gender equitable attitudes (IS  $p < .001$ , OS  $p < .001$ , Cronbach's Alpha = .852), and participants also showed statistically significant improvements on HIV knowledge, pregnancy and contraception knowledge, self-esteem, and self-efficacy ( $p < .001$  all). Qualitative data from FGDs and interviews with Coaches and staff support the quantitative findings: YEDI staff and Coaches reported observing positive behavior change in SG participants. They noted the role of soccer in creating a comfortable environment for discussion and learning. Coaches reported positive impacts on their own attitudes and behaviour as a result of their training and facilitation of SG

**Next steps:** SG is promising in engaging ABYM in critical discussions and providing important health information

## THPEC205

### Using Index Testing to Increase HIV Testing Yield: Implementation Progress in Rwanda

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**Background:** Significant progress has been made towards achieving the UNAIDS 90-90-90 target by 2020 with over 80% of people living with HIV (PLHIV) aware of their status globally. However, reaching the last PLHIV will be even more challenging. To strengthen identification of undiagnosed HIV infections and increase testing yields, Rwanda launched the HIV partner notification program involving active tracing of sexual partners of newly diagnosed HIV positive or known HIV positive clients by their partner or a health care provider. We report the results of the index testing initiative from implementing health facilities in Rwanda from

October 2018 to March 2019

**Methods:** The implementation started with a pilot phase of index testing and partner notification services in October 2017 in 23 sites in Kigali city with the highest HIV prevalence (6.3%) in Rwanda. Sexual partners elicited by consenting index clients were contacted by the clients themselves or by health care providers. Sexual partners presenting to the facility were offered HIV testing and those found HIV positive were linked to care and treatment services and thereafter became index clients. Before implementation, training of healthcare providers on HIV partner notification and counselling was provided followed by close mentorship on the strategy. Health care providers and data managers were trained on newly developed monitoring and evaluation of incorporating index testing indicators. We abstracted and conducted descriptive analysis of the data reported through the routine M&E system for the period, 31<sup>st</sup> October, 2018 to 31<sup>st</sup> March, 2019.

**Results:** From October 2018 to March 2019, a total of 44,459 clients were offered index testing services. Of these, 11,567 (26%) clients elicited sexual partners. Of the 17,701 partners elicited (index client: partner ratio of 1:1.5), 11,200 (63.2%) were either tested for HIV (10043) or reported known HIV positive status (1157). While of 10043 tested, 511 (5.1%) were newly identified HIV positive. HIV positive testing yields was 4.6% in females compared to 5.7% in males

**Conclusions and Recommendations:** The findings present strong justification for integrating index testing and partner notification into facility-based HIV Testing and Counselling services in Rwanda. We strongly recommended scale up of index testing and partner notification new strategy to achieving UNAIDS 90-90-90 targets.

## THPEC206

### Knowledge of HIV and Risky Sexual Behavior as Predictors of HIV and STI Infections in Young People in Cross River State, Nigeria

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**Background:** Globally, approximately 36.7 million people are still living with HIV, with young people (15 - 24 years) accounting for 42% of new infections (UNAIDS Global update, 2016). Therefore, the incidence of new HIV infection in this vulnerable group remains a problem in many developing countries in sub Saharan Africa. Based on the hypothesis that improved knowledge will reduce risky behavior, this intervention explores knowledge and risk assessment as predictors of HIV and/or STIs in young people in Cross River State, Nigeria.

**Methods:** The study used data from the Wise up campaign (HIV prevention) 2016 to analyze the association between HIV knowledge (HIV transmission routes, knowing ones HIV status, risk factors for HIV transmission), and risky sexual behaviors (unprotected sex with casual partners, unprotected sex with regular partner, and having multiple sexual partners in the past 3 months) as predictors of HIV and STI. Chi square was utilised to determine the predictors of HIV/STI.

**Results:** Of the 4,697 (10 - 45 years) HCT tested, HIV prevalence was 0.3%. About one in ten persons had good knowledge of HIV and were aged 20-24 years. Statistically, knowledge of HIV was not associated with the HIV test outcome ( $p = .59$ ) yet the predominant risky behaviours were unprotected sex with partner (40.3%) and multiple sexual partners (13.9%). HIV knowledge was significantly associated with risky behavior ( $p = .001$ ) as well as age ( $p = .001$ ) and gender ( $p = .009$ ).

**Conclusions and Recommendations:** HIV prevention Programs should focus on providing comprehensive information on HIV prevention and risk reduction intervention such as comprehensive sexuality education for in and out school youths, peer-to-peer education, Safe spaces, and more condom programming outlets especially for young people.

## THPEC207

### **Demand Creation for Oral Pre-exposure Prophylaxis for Female Sex Workers (Fsw) through Peer Educators Living with HIV in Taita Taveta County, Kenya**

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**Issues:** Pre-exposure prophylaxis (PrEP) is an effective HIV prevention method for people at ongoing risk of HIV infection and is an integral part of combination prevention. PrEP programs face sub-optimal demands creation as a key challenge. Use of peer educators (PEs) has been recommended as an effective approach in creating demand for HIV services among key populations. There is paucity of literature on the role of HIV positive PEs in mobilizing at-risk HIV negative peers to start PrEP. In this abstract, we describe experiences in utilizing HIV positive PEs to create demand for PrEP, a case study implemented by the Reachout Centre Trust (RCT), a registered civil society organization providing HIV interventions and PrEP in Taita Taveta County in Kenya since 2018.

**Descriptions:** RCT serves a catchment of 2,800 female sex workers (FSW) and 40 trained PEs among whom 16 (40%) are HIV positive. Forty PEs were trained using the National Peer Educators Curriculum. PEs provided peer education in 26 hotspots and referred FSW for HIV services including oral PrEP. HIV positive PEs shared their testimonies drawing from life experiences, living with HIV and the challenges of using daily antiretroviral treatment, to promote PrEP uptake. HIV positive PEs were required to share tips about how they maintained safe sex practices and good adherence on ART. We analysed routine program data from FSW initiated on PrEP at the RCT site and compared uptake, and month 1 and 3 PrEP continuation between FSW mobilized and followed-up by HIV positive PEs and those followed-up by HIV negative PEs.

**Lessons learned:** Between April 2018 and May 2019, 356 FSW were initiated on PrEP through referrals from 40 PEs. The age of FSW initiated on PrEP ranged from 18-54 years. Of the FSW initiated on PrEP, 302 (85%) were referred by, and belonged to cohorts of HIV positive PEs. Month 1 and 3 continuation for all FSW on PrEP were 76.3% and 58.3% respectively. FSW who belonged to cohorts of HIV positive peer educators had better continuation (month 1 - 76.3%, month 3 - 58.3%) compared to FSW who were part of HIV negative PEs' cohorts (month 1- 32.4% and month 3 - 29.4%).

**Next steps:** Most FSW initiated on PrEP at the RCT site were referred by HIV positive PEs. Continuation rates were significantly better for clients followed-up by HIV positive PEs. There is potentially a greater role of people living with HIV in creating demand and supporting their peers to access HIV prevention services including PrEP.

## THPEC208

### Potential for PrEP Scale up in Private Health Facilities: Programmatic Results from a Large-scale PrEP Project in Kenya

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**Background:** The government of Kenya prioritized integrated scale-up of oral PrEP for HIV prevention following WHO's 2015 recommendations. Strategies to include the private sector were needed in Kenya, as private health facilities constitute nearly half of Kenya's facilities, spend 33% of total HIV expenditure, and conduct about one-third of HIV tests. Jilinde is a large-scale PrEP project, funded by Bill & Melinda Gates Foundation, to provide PrEP to key and vulnerable populations in Kenya. We use programmatic data to describe the uptake of PrEP and lessons learnt in supporting scale-up through private health facilities in Kenya.

**Methods:** We report trends in uptake and continuation of PrEP in 12 private facilities supported by Jilinde from February 2017-June 2019, and the lessons learnt in the process. We obtained data on uptake from monthly summary forms approved by Kenya's Ministry of Health. Continuation rates were calculated as a proportion of clients returning for their appointments against those who were expected in any given period.

**Results & lessons learnt:** During this period, 1,526 clients initiated PrEP through private facilities representing 6% of all clients ever initiated on PrEP within Jilinde. The uptake of PrEP per month increased gradually from two clients in February reaching a peak of 126 in June 2017. Thereafter, there was no specific pattern, with number initiating PrEP ranging from 22 to 108 clients per month. All-time month-one continuation rate was 48% and a similar trend consistently observed at each designated revisit time point. Private facilities were not able to generate income from offering PrEP services but the management of these facilities continued to embrace the services. PrEP drugs were offered freely although occasionally clients would not access services because they were unwilling to pay consultation fees. Perceived workload increase demanded that provider motivation to perform an expanded package of tasks was maintained. The inability to deliver a comprehensive package of HIV interventions and limited business potential from PrEP were identified as key shortcomings.

**Next steps:** Our data demonstrates the potential for integrating PrEP services within private facilities. However, this model demands building an investment case for integrating PrEP and emerging HIV prevention methods among entrepreneurs owning private facilities; this includes figuring out a waiver mechanism for clients unwilling to pay for services.

## THPEC209

### Impact of the Use of the Contraceptive Vaginal Ring on the Vaginal Practices among Women in Kigali: Clinical Case Study from Rwanda

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**Background:** Previous evidences have shown that HIV prevention developments including the dapivirine vaginal ring are promising results in protecting women from getting HIV. Furthermore, a healthy vaginal ring could be protective against HIV/STIs; yet vaginal practices may disturb the vaginal environment. The main purpose of the present clinical study was to explore vaginal practices and to assess changes in vaginal practices during contraceptive vaginal ring (CVR) use among Rwandan women.

**Methods:** In 2013, Rinda Ubuzima, a research site in Kigali, Rwanda, collected data on vaginal practices using mixed methods: in-depth interviews, focus group discussions, case report forms, including diary cards, and interview administered questionnaires during a safety and acceptability study of CVRs. After the baseline visit, education about safe vaginal practices was provided at subsequent study visits. Descriptive and thematic analyses were conducted

**Results:** At the baseline visit, 57% of the 289 participants reported washing inside and outside the vagina while 124 (43%) reported washing outside only. Participants reported washing inside the vagina while bathing (93%), after sex (63%), and during menses (54%). Qualitative data suggested that vaginal practices went beyond those listed in the survey and included a variety of herbs, foods, and other remedies to treat vaginal symptoms, increase vaginal lubrication and tightness, and clean the vagina. When surveyed at the study visits, only 14 of the 120 (12%) enrolled women reported changes in vaginal practices following ring insertion and education. After triangulation of quantitative and qualitative data, over 25% of the participants reported changes in vaginal washing practices: the majority (73%) decreased practices, 26% increased, and 1% did a combination of increasing and decreasing during ring use.

**Conclusions and Recommendations:** Our findings showed that vaginal cleaning was frequent among the targeted study population. Interestingly, increased education from the research site about vaginal practices showed that one quarter of the women could change their behavior during the short duration of the study. I would recommend continuous education and sensitization against poor vaginal practices among Rwandan women



## THPEC210

### **A Winning Team! Increasing Knowledge of HIV and HPV Prevention Methods among Adolescents Using an Adolescent Friendly, Sex Specific Educational Modules: Findings from a Pilot Programme in Tanzania**

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**Issues:** The AIDSFree VMMC project implemented by Jhpiego in Tanzania, assists the Tanzanian Ministry of Health, Community Development, Gender, Elderly, and Children (MOHCDGEC) to generate demand, increase access, and improve VMMC service provision in five regions. Two regions are focused on adolescent friendly services for 10-14 year olds. In 2018, Jhpiego and Grassroot Soccer (GRS) adapted GRS' evidence-based VMMC intervention to target boys aged 10-14 to increase knowledge around VMMC. The MOHCDGEC announced national HPV routine service delivery targeting girls aged 14, and recognizing overlap of age targets for both HPV and VMMC interventions, GRS and Jhpiego restructured the programme and piloted sex-specific interventions to target both adolescent boys and girls to improve knowledge on HIV risk reduction, VMMC, and HPV.

**Description:** SKILLZ *Timu ya Ushindi* ("Winning Team" in kiSwahili), is a once-off intervention delivered by a mixed-sex teacher pair in a school setting. Students are divided into same-sex groups where they participate in soccer-based activities and meaningful discussions. The boys' content covers comprehensive VMMC information and circumcised male coaches share their personal stories about the procedure. The girls' content covers comprehensive HPV, cervical cancer, and HIV transmission information. Female coaches share real-life stories on how they utilized local services and modified behavior to prevent cervical cancer. Boys and girls are then brought back together to share what they learned and, if interested, referred to service providers. A survey was administered to students before and after the intervention.

**Lessons learned:** From September to December 2018, 41 teacher coaches facilitated the intervention 34 times to 1,346 students (51% female, 49% male, median age: 12). 65% of interventions were conducted during school while 35% were after school.

Students demonstrated a significant increase (14.8%) in HPV knowledge at 95% CI (0.12-0.17). There was also a statistically significant difference in VMMC knowledge increase between males and females ( $p < 0.01$ ).

**Next steps:** The pilot programme demonstrated an increase in HPV and VMMC knowledge for female and male students, with a significantly higher increase in VMMC knowledge amongst females than males. SKILLZ *Timu ya Ushindi* can add value to programming and be expanded to other adolescent health and reproductive issues.

## **THPEC211**

### **Prophylaxie Pré-exposition au VIH: Connaissance et Adhésion des Acteurs Prenant en Charge le VIH à Bobo-Dioulasso (Burkina Faso)**

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**Introduction:** La prophylaxie pré-exposition (PrEP) est un traitement médicamenteux qui empêche la contamination au VIH chez des personnes non infectées. Elle est recommandée par l'OMS depuis 2015 pour les sujets éligibles. En l'absence d'étude sur le sujet dans notre contexte, nous avons réalisé une enquête dans le but d'évaluer les connaissances des acteurs intervenants dans la prise en charge des personnes vivant avec le VIH (PvVIH) sur la PrEP au VIH dans la ville de Bobo-Dioulasso (Burkina-Faso).

**Méthodologie:** Une enquête transversale à visée descriptive a été réalisée en juillet 2019. La collecte de données s'est effectuée dans les établissements publics de santé de prise en charge du VIH dans la ville de Bobo-Dioulasso (Hôpital de jour adulte, Hôpitaux de districts de Dô et Dafra). Un questionnaire anonyme a été adressé aux agents intervenants dans la prise en charge des PvVIH dans ces structures.

**Résultats:** Au total 24 acteurs se sont prêtés à notre questionnaire.. On notait une prédominance féminine avec un sex ratio de 0,71. L'âge moyen était de 43 ans. Les conseillères psychosociales étaient la catégorie professionnelle la plus représentée (41,7%). Plus de la moitié des participants (57,9%) avait une d'ancienneté professionnelle supérieure à 10 ans. La majorité (54,2%) n'avait pas reçu de formation sur la PrEP. La plupart (87,5%) des participants connaissait la définition de la PrEP. Les critères d'éligibilité étaient connus par la majorité des acteurs (87,5%). On notait une faible maîtrise de la durée optimale pour une efficacité de la PrEP (33,3%). Plus d'un tiers des acteurs (37,5%) ne connaissait pas l'association de molécule à utiliser. Seulement 50% des participants connaissaient le principal effet secondaire de la PrEP. Près de la moitié des acteurs (45,8%) estimait que l'introduction de la PrEP pourrait être associée à une augmentation des comportements à risque. La quasi-totalité de nos participants (94,7%) trouvait que la PrEP avait sa place dans notre contexte. Environ la moitié jugeait que la PrEP aurait un grand impact dans la prévention de l'infection à VIH. Tous les sujets ont reconnu avoir besoin d'une formation en PrEP. La plupart des participants (88,2%) était prêts à recommander la PrEP aux personnes éligibles.

**Conclusion:** La prophylaxie pré-exposition au VIH reste encore peu connue des acteurs prenant en charge le VIH d'où le besoin de formation de ces acteurs.

**Mots clés:** Prophylaxie, exposition, VIH, Bobo-Dioulasso

## THPEC212

### **Adopting Voluntary Partner Referral Services to Improve HIV Case Identification and PrEP Uptake among MSM at Maaygo in Kisumu County, Kenya**

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**Background:** In Kenya, men who have sex with men (MSM) have a disproportionately higher HIV prevalence compared to other men (general population). Recent studies estimate that about 18.2% of MSM in Kenya live with the virus (Kenya Aids Response report, 2018). MAAIGO has been in the frontline in HIV case finding and prevention using Voluntary Partner Referral Services for index clients and their sexual contacts among her target population (MSM) in the Lake region.

**Methods:** Due to high HIV prevalence among MAAIGO's target population, VPR was adopted as a strategy to help improve case identification and linkage of MSM to combination prevention services with more emphasis on PrEP. A number of strategies were incorporated including index client listing, peer to peer mobilization, creation/using of WhatsApp platforms, health talk sessions, prioritization of newly identified HIV positives and high viremia patients.

**Results:** As at June 2019, 74 (38.74%) index clients had been offered VPR eliciting 158 sexual contacts out of which 23 were known positives (14.56%), 135(85.4%) eligible for testing and 129 (95.5%) contacts tested, identified 19 (14.7%) new HIV positive cases leaving 110 (85.3%) tested HIV negative. 51(46.4%) HIV negative MSM were linked and newly enrolled to PrEP between March to June 2019. As at June 2019, continuation at month 1 was 7 contributing to 31.8% and at month 3 were 3 contributing to 50% continuation rate.

**Conclusion:** Voluntary Partner Referral is a useful model in improving case identification and linking MSM to HIV prevention and treatment. More sensitization for MSM community through health education, disclosure, data capture and reporting tools and resources are needed to sustain this model.

## THPEC213

### Comparison of Adherence Measurement Tools Used in a Pre-exposure Prophylaxis (PrEP) Demonstration Study among Female Sex Workers (FSWs) in Cotonou, Benin

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**Background:** Using data from a demonstration project on PrEP among female sex workers (FSW) in Benin, we aimed to measure adherence to PrEP and compare self-report and pill count adherence to tenofovir (TFV) concentrations in plasma to determine if these 2 measures are reliable and correlate well with biological adherence measurements.

**Methods:** Plasma TFV concentrations were analyzed in samples collected at day-14 and months 6, 12, 18 and 24 (or at the last visit for subjects with shorter follow-up). Self-reported adherence was captured at day-14 and then quarterly by asking participants to report the number of missed pills within the last week. For pill count, medications were refilled monthly and participants were asked to bring in their medication bottles at each follow-up visit. Using generalized estimating equations adherence measured by self-report and pill count was calculated and compared to plasma drug concentrations.

**Results:** Of 255 participants, (47.1%) completed follow-up. Adherence measured by both TFV concentrations and self-report decreased over time ( $p=0.0086$  and  $p=0.0262$ , respectively), while the decreasing trend in adherence by pill count was not significant ( $p=0.0869$ ). The decrease in adherence was however more profound using TFV concentration than the other 2 adherence measures.

**Conclusions and Recommendations:** With high levels of misreporting of PrEP adherence using self-report and pill count, the objective biomedical assessment of adherence via laboratory testing is optimal and more accurately reflects PrEP uptake and persistence. Alternative cheap and accurate approaches to monitor adherence in the context of PrEP programs implemented in resource limited countries, such as urine testing, should be investigated.

## THPEC214

### **Mobilisation des Professionnelles de Sexes (PS) ne s'Identifiant pas Cairement à leur Cible pour le Programme de Prévention du VIH et des IST: Cas de l'ONG Espoir Vie - Togo/Région Centrale (EVT-RC)**

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**Contexte:** La Région Centrale du Togo, fortement musulmane est hostile aux populations clés dont les PS parmi lesquelles la majorité a peur de s'identifier à leur cible. Elles préfèrent laisser leurs contacts chez les gérants des coins shows, d'auberges et de cabarets qui les appellent pour les « brancher » aux clients et elles retournent chez elles une fois le service rendu au client. La mobilisation et la fidélisation de ces personnes pour le programme de prévention des IST et VIH chez les PS reste difficile.

**Description:** Depuis 2017, une approche particulière pour mobiliser les PS et surtout les PS ne s'identifiant pas à leur cible a été mise l'œuvre. Ceci, avec l'aide des gérants des lieux qui, bénéficiant d'une confiance primaire de ces filles, arrivent, sur demande d'EVT-RC, à les convaincre et à les rapprocher des pairs éducateurs (PE) de la cible PS.

Les PE étant permanentes sur les lieux, constatent la régularité de ces filles et la variation des hommes avec lesquels elles arrivent et les approchent dans la suite pour appliquer la procédure. Un suivi est fait par les PE dans la suite afin de s'assurer de la fidélisation des PS au programme.

#### **Resultats:**

- Mobilisation du grand nombre de PS qui ont bénéficié du programme de prévention du VIH : **611** PS en 2017 et **345** PS en 2018 ; **500** entretiens individuels et **532** causeries de groupe réalisées ;
- Accès du grand nombre de PS à l'offre du CDV (Conseil Dépistage Volontaire) : **473** PS en 2017 et **248** PS en 2018 ont été dépistées du VIH et connaissent leurs résultats ; **14** cas positifs ;
- Maintien de la majorité des PS séropositive dans le continuum de soins constituant la file active : **13** PS (**92,85%**) sur **14** séropositives ayant initié le TARV continuent les soins au niveau du service adapté ; **99** cas d'IST diagnostiqués et traités ;
- Nombre de préservatifs et gels lubrifiants distribués aux PS : **22867** préservatifs masculins et **5524** préservatifs féminins ; **13250** gels lubrifiants distribués.

**Leçons apprises:** Cette approche a permis de mobiliser un grand nombre de PS et de les fidéliser au programme de prévention du VIH. Il s'avère nécessaire que les capacités des structures de mobilisation, de prévention de prise en charge du VIH/Sida et IST chez les PS soient renforcées afin d'atteindre le grand nombre et surtout la cible cachée.

## THPEC215

### Facteurs de Rétention des Professionnelles du Sexe dans une Étude de Démonstration de la Prophylaxie Pré-Exposition au VIH au Sénégal

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**Background:** Des méthodes innovatrices en matière de prévention à l'infection au VIH à base d'antirétroviraux (ARV) offrent de nouvelles opportunités de renforcer les stratégies de prévention et de traitement du VIH au Sénégal, surtout chez les populations clé telles que les professionnelles du sexe (PS). De plus en plus de projets de démonstration sur la PrEP (prophylaxie pré-exposition) orale sont en cours mais les données sur les facteurs de rétention sont limitées spécialement lorsque ces projets sont menés dans structures de santé publique comme cela a été fait au Sénégal.

**Methods:** Le projet de démonstration sur la PrEP au Sénégal est une étude de cohorte prospective ouverte évaluant l'administration orale quotidienne du Truvada (Emtricitabine/Tenofovir DF) chez les PS dans 4 centres de santé (Pikine, Mbao, Diamniadio, Rufisque). Nous avons évalué la rétention dans l'étude après 6 et 12 mois de suivi. Des équations d'estimation généralisées ont été utilisées identifier les prédicteurs de la rétention dans l'étude.

**Results:** Sur les 324 PS éligibles, 267 (82,4%) ont été enrôlées. L'âge moyen était de 38 ans (écart type=8,7). La plupart étaient sénégalaises (96,7%) et 46,1% d'entre elles n'ont jamais fréquenté l'école. Parmi les 267 enrôlées, 70,4% ont été retenues dans l'étude après 6 mois de suivi (Pikine: 68,5%, Mbao: 78,8%, Rufisque: 71,2%, Diamniadio: 65,8%; valeur  $p=0.439$ ) et 67% après 12 mois de suivi (Pikine: 69,9%, Mbao: 61,5%, Rufisque: 72,7%, Diamniadio: 63,2%; valeur  $p=0.483$ ). L'âge élevé était un prédicteur d'une bonne rétention dans l'étude ( $P=0,0012$ ). Les PS entre 25-34 ans (Ratio de prévalence (PR)=2,53, IC à 95%=1,22-4,99), 35-44 ans (RP=3,24, IC à 95%=1,62-6,23) et 45 ans et plus (RP=3,85, IC à 95%=2,13-10,27) étaient significativement plus susceptibles d'être retenues dans l'étude comparée aux PS de 18-24 ans. Nous n'avons pas trouvé de différence significative dans la rétention selon le site de l'étude, l'éducation, le statut légal (enregistrée ou clandestine), l'utilisation constante du préservatif ou la perception du risque à l'infection au VIH.

**Conclusions and Recommendations:** Nos résultats montrent une bonne rétention des PS dans l'étude après 12 mois de suivi lorsque la PrEP est offerte dans les structures de santé publique. Des travaux de recherche supplémentaires sont nécessaires pour identifier les facteurs pouvant optimiser la rétention des PS dans les programmes PrEP au niveau des structures de santé publique.

## **THPEC216**

### **Social Media, a Tool to Facilitate Access to Information on HIV Prevention and Treatment among Young People in Nigeria**

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**Issue:** Nigeria remains the most populous country in the African continent with over 198 million people. The Nigerian population is disproportionately young with over 50 million Nigerians been between the ages of 10 and 24 years and vulnerable to sexually transmitted infections including HIV and unwanted pregnancy. Factors such as judgemental attitudes of healthcare service providers, socio-cultural norms, adolescents' own fear and shame, disapproval from parents and community gatekeepers still contribute to adolescents' poor access to age-appropriate sexual reproductive health information and services. The aim of this study was to provide age-appropriate, accessible, no-parent interference and no-cost comprehensive information on sexual reproductive health and rights among young people.

**Description:** This intervention used strategic social media platforms including Facebook, Twitter, and Instagram to provide information on sexual reproductive health among young people for three months. Twitter chats, message series and attractive picture campaigns on family planning and HIV/AIDs were designed by young people and run on a daily basis by young people. Question and comments raised by young people were addressed and referrals were made as indicated. Organizations that work with young people were engaged to provide technical support and partnership.

**Lessons learned:** Three hundred and fifty young people were active on Facebook, six hundred and thirty-four tweets were sent out, and one hundred and sixty-six thousand, seven hundred and twelve accounts were reached and 827,443 impressions (exposure) were made in the three months.

**Next steps:** The use of social media has proven to be a veritable intervention to reach young people with accurate information on HIV prevention and treatment. It is therefore imperative that we leverage these platforms to ensure young people's access to sexual reproductive health information and services.

## **THPEC217**

### **Scaling Up Implementation of Recency Testing in Kigali City**

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**Issues:** Integration of recency testing in HIV program aimed to fast track program surveillance and monitoring systems. After nine Month of phase 1 implementation, national program moved into wide scale up. We evaluated innovative approaches used to achieve a rapid scale up of Recency testing in Kigali City.

**Descriptions:** The national HIV and Reference laboratory jointly with partners decided to scale up Recency testing initially in 23 Sites identified in Kigali City because those sites supported by PEPFAR had already integrated Case Based Surveillance and present a high HIV prevalence. In June 2018, August 2018, HIV, NRL and Hubs are trained as national trainers to prepare and do Recency Proficiency Tests Panels. In their turn, they conduct the Training of providers from Kigali City Health Facilities on sample collectors. In September 2018, NRL starts Recency Testing using reader machine; the health facilities refer samples to the NRL using the current sample transport system then, NRL performs HIV recency testing using Asante Rapid Recency Assay. For preliminary recency patient, VL enumeration is done. Then, NRL enter results in LIS and avail printout copies for requesting health facilities. Three months later, roll out of Recency testing at Hubs took place; health facilities refer samples to the nearest VL testing hub. Test and return HIV recency test results to referring health facilities immediately after testing and enter test results into their laboratory information systems. During March 2019 begins the scaling up of HIV Recency testing in 23 Case Based Surveillance Sites in Kigali City. This sites offer Point of Care collect blood samples for recency rapid testing and conduct Recency testing. If recent infection, they send the remaining sample to the nearest VL testing hub.

**Lessons learned:** When the Recency test is done at the central level the results are available at the requesting health facility within 14 days, which delays the result announcement to the client and consequently the delay of rapid intervention. While if Recency test is done at the health facilities (POC) using asante rapid test, Long term result is immediately announced to the clients and for Recency infection result have to be confirmed at the central hubs with a viral load measure.

**Next steps:** The expansion of point of care HIV recency testing is important to ensure rapid access to the tests results and to guide rapid program decision-making on appropriate interventions to be implemented.



## THPEC218

### HIV Partner Notification Opportunities for Index Patients and their Sexual Partners in Rwanda

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**Background:** World Health Organization considered the Index testing and partner notification as a core intervention used to efficiently and effectively identify HIV positive individuals. In 2017, Rwanda implemented a national program on index, recency and family-testing offering to all newly identified and people living with HIV (PLWHIV) through both community and facility based testing initiatives in all public health facilities. We provide an update on HIV partner notification program - active tracing of the sexual partners and their HIV status.

**Methodology:** Routine data were collected through electronic medical record from all the health facilities countrywide. Data include index cases offered index testing services by age/sex, index cases that accepted index testing services by age/sex, contacts elicited by HIV status and age/sex, known Positives cases, newly diagnosed HIV positive, contacts tested by test result and age/sex, known tested HIV negative and were collected during the period September 2018 to March 2019. We analyzed data using descriptive statistics and multivariate logistic regression models.

**Results:** We offered an index testing and partner notification services to a total number of 44,459 clients across the country for the period of 6 months. 11,567 (26%) accepted the service and among them we identified 17,701 as their sexual partners (ratio 1:1.5). Among the tested sexual partners, 1,157 (6.5%) know their HIV status, 511 (44%) were identified as new positive cases of PLWHIV during the index, Recency and family testing services.

**Conclusion:** Index testing may increase HIV testing yield in reaching undiagnosed people living with HIV in Rwanda, the findings present strong evidence for integrating Index testing partner notification into facility-based HIV Testing and Counselling services in Rwanda. Furthermore, partner notification serves as entry point to other prevention services as well as linkage to care and treatment. We strongly recommended scale up of Index testing and partner notification new strategy to achieving UNAIDS 90-90-90 targets.

## **THPEC219**

### **Creating Artifacts from HIV and AIDS Tools, Pill Bottles and Stories for Future Generations, Breaking Myths and Misconceptions to Change the Face of HIV in Uganda**

Kemigisa Barbara

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**Issues:** HIV and AIDS are still scary words and topics to mention in the African setting despite how much information we have tried to give. The fear is inbuilt in our mindset and blood system that it makes it hard for people to go for services, adhere or receive treatment and care.

**Descriptions:** The HIV and AIDS stories started before most of us were born and it has been our responsibility as people living with HIV and others in the fight to collect all necessary and relevant information and materials that could prove HIV should not be as scary as many think it is.

**Lessons learned:** Children and youth need reality to see and judge the stories they have heard. They are no longer moved by mere stories of those living with HIV because today people look very healthy and no longer passing on the virus with good adherence to medications.

**Next steps:** We are currently recycling empty ARV bottles into different house hold items like planters, chairs, flower vases among others. we have a variety of bottles types from different manufacturers and drug types as well as those no longer in supply. They have been great tools in telling the HIV story, fighting stigma among the youth and children recycling hem as they are no longer ashamed to be seen in public with their medication. Creating these arts has enabled us to have a unique youth center that engages children and youth living and affected by HIV and AIDS. They have learnt that they have the potential to share their stories to their peers using their pills and other collected items to bring out the realities of living with HIV but also how they have been able to live healthy and productive lives.

I recommend that different countries embrace the practice because it not only helps with the above but also protects the environment against the many bottles produced.

## THPEC220

### The Contribution of HIV Viral Load to Improving the Accuracy of Recent Infection Testing in Rwanda

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**Background:** Rwanda is committed to achieving the UNAIDS target of ending the HIV/AIDS epidemic by 2030. Rwanda initiated new approaches including index testing, partner notification and recency testing using rapid assays to identify recent infections in combination with Active Case Based Surveillance (A-CBS) system and program to inform public health action to improve on case finding and interrupt ongoing transmission. This analysis aims to assess the contribution of HIV viral load (VL) test in the Recent Infection Testing Algorithm (RITA) to improve the accuracy of recency testing and a comparison of RTRI and RITA results by age and sex in Rwanda.

**Methods:** Between August 2018 and June 2019, newly identified HIV positive patients aged  $\geq 15$  years using the national HIV testing algorithm were tested on a rapid test for recent infection (RTRI: Asante HIV-1 recency test) to determine whether they were recent or long-term infections. Samples classified as recent on Asante (RTRI-recent) were subjected to recent infection testing algorithm (RITA) including viral load testing using COBAS®AmpliPrep/COBAS® TaqMan at the National Reference Lab to confirm recent infection. Confirmed recent infections were classified as RTRI recent samples with HIV-1 RNA  $>1,000$  copies/mL (virally unsuppressed).

**Results:** Among 2,312 HIV+ samples tested on Asante, 290 (12.5%) were classified as RTRI recent, of which 192 (66.2%) with  $VL \geq 1000$  RNA copies/ml were classified as RITA recent (8.3%), while 97 (33.4%) with  $VL < 1000$  RNA copies/ml were reclassified as long-term infections and one was inconclusive. The proportion of RITA recent among RTRI recent tests was 72.2% in men and 63.4% in women and no significant difference of proportions in the RTRI and RITA classification of recent infection observed across age categories ( $p=0.246$ )

**Conclusion/recommendations:** Results highlight that VL testing is essential in a RITA for identifying, characterizing, and acting on recent transmission in Rwanda. One in three RTRI-recent cases had suppressed viral load, underscoring that a substantial number of persons reported as new HIV diagnosis in Rwanda may be previously diagnosed and on treatment or to a lesser extent, a long-term non-progressor or elite controller. Repeat or "cure" testing needs to be investigated and documented among previously diagnosed PLHIV, and proper HIV pre-testing counseling to identify these individuals before recency testing.

**Keywords:** Recency, HIV, VL testing, algorithm, RITA, elite controllers

## FRPEC091

### Evaluation of the Stepping Stones Approach to HIV Prevention among Adolescents and Youth in Eswatini

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**Background:** Eswatini's HIV prevalence is among the highest in the world, at 27.4%. One third of new infections occur among young people age 15-24 years, fueled by limited HIV prevention knowledge and inconsistent condom use. Adolescent girls and young women (AGYW) have twice the HIV incidence of their male peers. As part of the national response, Eswatini is implementing the Stepping Stones approach to HIV prevention. From 2016-2018, the program reached 22,923 out of school adolescents and youth age 10-24 years in 20 communities. In 2019, the program was formally evaluated.

**Methods:** 477 participants were surveyed in 8 communities. Data was collected with a survey tool comprised of 56 knowledge, behavior, attitudes, access and attribution indicators, loaded on tablets with SurveyToGo software. Survey data was complemented by qualitative insights from 32 focus group discussions and 20 key informant interviews.

**Results:** Completing the Stepping Stones program was associated with improved PrEP knowledge for females (OR 1.81 95% CI 1.09-3.03), greater sexual agency (ability to say no) for males (OR 2.23 95% CI 1.28-3.86), lower perceived HIV risk for both sexes (OR 0.58 95% CI 0.38-0.88) and lower perceived pregnancy risk for both sexes (OR 0.67 95% CI 0.45-0.98). Compared to national survey data, Stepping Stones participants exhibited dramatically higher HIV prevention knowledge and uptake of HIV testing, and above average condom and contraception use. 74% of Stepping Stones participants could correctly identify ways of preventing sexual transmission of HIV and reject major misconceptions, compared to 49% in the multiple indicator cluster survey (MICS). 87% of Stepping Stones participants received an HIV test in the past year, compared to 63% in SHIMS 2. 80% of female Stepping Stones participants were using a modern contraception method, compared to 68% in MICS. 69% of female Stepping Stones participants used a condom at last sex, compared to 63% in SHIMS 2. Effects were sustained up to 3 years post-intervention.

**Conclusions and recommendations:** The Stepping Stones program positively contributed to HIV prevention among young people in Eswatini. To optimize outcomes, the curriculum should be updated and augmented, especially on gender-based violence and economic empowerment. Engaging parents and caregivers, and empowering facilitators to track participant outcomes, would further improve delivery. Investments in the program should be maintained or scaled up.

## **FRPEC093**

### **Exploring the Inclusion of Young Persons with Disability (YPwDs) Aged 15-49 in Sexual Reproductive Health and Family Planning Services in Zanzibar**

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**Issues:** Structural, social economic, environmental, physical, legal and individual barriers do exist and affect access and use of SRH/FP services among young Persons with Disability (YPwDs) aged 15-49 in Zanzibar.

**Descriptions:** This is a descriptive design study conducted in 2018 and involved 300 respondents from Unguja and Pemba. Different data collection techniques were used, and data collectors have trained on pretested tools. Generated data were checked for completeness, cleaned using Microsoft Excels and analyzed using SPSS software. Findings showed that, 62.9% of respondents faced difficulties in accessing SRH/FP services, due to physical and sexual violence targeting them, discrimination based on their age, gender, type of disability, inadequate level of privacy, negative attitudes from family members, guardians and doctors; gender disparities, inadequate number of SRH/FP training and legal barriers. Furthermore, 49.6% of respondents did not know as to where they can get integrated user SRH/FP friendly services targeting them, while 50.4% of in-depth interviewers have never been provided with user friendly SRH services, as homophobia and inadequate number and knowledge of HCWs on how to deal with young Persons with Disability, social cultural norms, poor infrastructure accessibility to the health facilities and other buildings, incorrect knowledge of SRH/FP among young PwDs including myths and misconceptions around contraception and condom use.

**Lessons learned:** In order to build a truly inclusive society and achieve development agenda 2030 of not leaving anyone behind, Zanzibar has to address all structural, social economic, environmental, physical, legal and individual barriers affecting youth Young PwDs 15-49 to access and utilize SRH/FP services

**Next steps:** The Government of Zanzibar through its department of disability affairs, stakeholders and development partners should put special consideration on empowering young PwDs with SRH and information on right to family planning services, as well as developing implementation plan and Standard Operating Practices to address barriers that affect Young PwDs to access and use of SRH/FP services.

**Keywords:** SRH; FP; Young Persons with Disability (YPwDs); Barriers to SRH/FP

## FRPEC094

### Predictors of Early Onset Neonatal Sepsis among Neonates in Dodoma, Tanzania: A Case Control Study

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**Background:** Early onset neonatal sepsis contributes significantly to the burden of neonatal morbidity and mortality in the first week of life. In Tanzania, neonatal sepsis accounts for 32% neonatal illness and leads to 29% of newborn deaths yearly. The objective of the study was to assess predictors of early-onset neonatal sepsis among neonates.

**Methods:** A hospital based case-control study of randomly selected 105 cases and 217 controls in 3 hospitals in Dodoma region. Cases were neonates diagnosed with neonatal sepsis and controls were neonates without neonatal sepsis. Controls were matched to the cases by mother's age and parity at a ratio of 1 case to 2 controls. A semi-structured questionnaire was used to collect information about the potential predictors; including maternal and neonatal factors as well as intrapartum emergency interventions. Descriptive and inferential statistical analyses were employed to measure the independent association between independent variables and the outcome of interest.

**Results:** Most (92.5%) of neonates were born at term and 7.5% were premature. Average birth weight was 3 kilograms and 16% neonates had low birth weight (< 2500 grams). Up to 33% of the newborns had early-onset neonatal sepsis. After adjusting for confounders, the maternal factors which showed significant association with early-onset neonatal sepsis were maternal history of chorioamnionitis [AOR=1.910, p=0.042, 95%CI: 1.022-3.56], maternal positive HIV status [AOR=2.909, p=0.012, 95%CI: 1.020-8.296], prolonged rupture of membrane [AOR=2.857, p=0.014, 95%CI: 1.233-6.619] and multiple digital vaginal examinations during labor [AOR=5.178, p=0.026, 95%CI: 1.220-21.986]. Neonatal factors; perinatal asphyxia [AOR=6.781, p=0.006, 95%CI: 1.725-26.652].

**Conclusions and Recommendations:** Maternal infection(s), obstetric complications and substandard procedures during labor and delivery have significant effects on the occurrence of early-onset neonatal sepsis. Prevention of early-onset neonatal sepsis could be achieved by addressing maternal infections, obstetric and neonatal related conditions.

Prevention of mother to child HIV infection (PMTCT) is vital when addressing HIV/AIDS. Services should be offered before conception, and throughout pregnancy, labor and breastfeeding. Preconception screening, safe sexual practices, HIV status disclosure, proper ART adherence are key issues to emphasize on individual mother, couple and the community as a whole.

## FRPEC095

### Factors Associated with Utilization of Family Planning Services by HIV Positive Women Attending HIV Clinics at the AIDS Support Organization (TASO), Uganda

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**Background:** According to a study on access to family planning services in low and middle income countries (LMIC), the unmet need for FP range between 20 % and 58 % (Wulifan, et al., 2016). Through routine retrospective analysis of data from 9 TASO sites from July to December 2015, we noted that the unmet need for FP services was 76.3%. According to the Uganda National HIV and AIDS Strategic Plan 2015/2016- 2019/2020, there is no baseline data on unmet need for FP among PLHIV (Uganda AIDS Commission, 2014). We examined unmet need for FP among HIV positive women aged 15-49 years and assessed the factors that hinder or favor utilization of FP services in TASO.

**Methodology:** This was a cross sectional study at TASO Mulago and TASO Gulu carried on between 1st October 2017 to 31st December 2017. The study outcome was unmet need of family planning defined as women who are fecund and sexually active but are not using any method of contraception. We used a logistic regression analysis to assess for factors that hinder or favor utilization of FP services in TASO. Data was analyzed using Stata version 12 statistical software.

**Results:** A total of 858 female study participants were interviewed, 90(11%) aged 15-24yrs, 461(55%) aged 25-34 years , and 35 years and above 287(34%). Results revealed that 23% participants (21 of 92) reported unintended pregnancies. The prevalence of unmet need for FP among the HIV+ women attending HIV Clinics in TASO was 44.4%. The proportion of fecund HIV+ women in sexual relationships who desire to terminate or postpone child bearing was 22.8%. Factors that significantly favor or hinder utilization of FP services were availability of FP materials (AOR = 8.97,  $p= 0.001$ ); and failure to understand a wide range of FP methods significantly hinders utilization of FP services (AOR = 0.15,  $p= 0.014$ ).

**Conclusions:** The study found that HIV positive women who had access to Family planning materials had higher odds of FP utilization. Adult had high odds of FP utilization compared to adolescents. Failure to understand a wide range of FP methods hinders FP utilization, suggesting the need to sensitize HIV positive women on all the available options of FP.

## FRPEC096

### Does Peer Education Go beyond Giving Reproductive Health Information? A Cohort Study in Bulawayo and Mount Darwin, Zimbabwe

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**Background:** Peer education has largely been a community-based intervention within the voluntary medical male circumcision (VMMC) - adolescent sexual and reproductive health (ASRH) linkages pilot project in Bulawayo (urban city) and Mount Darwin (rural district), Zimbabwe since 2016. Service delivery points under this project were oriented on the VMMC - ASRH linkages service delivery protocols. The protocols highlight scope of work, reporting, referral, coordination and supervision mechanisms for peer educators. Services demand creation relies heavily on peer educators and VMMC mobilizers. However, little is known if benefits extend beyond giving information.

We therefore assessed the extent of and factors affecting referral and receipt of HIV testing services (HTS), contraception, diagnosis and treatment of sexually transmitted infections (STIs) and VMMC services by young people (10 - 24 years) counselled by peer educators in the two project areas during October - December 2018.

**Methods:** This was a cohort study utilizing the project's routinely collected secondary data. The censor date for assessing receipt of services was 31 January 2019. Factors affecting non-referral and non-receipt of services were assessed by log-binomial regression. Adjusted risk ratios (aRR) were calculated.

**Results:** Of the 3370 counseled, 65% were referred for at-least one service. Among males counseled, 58% were referred for VMMC. Other services had 5-13% referrals. Non-referral for HTS decreased with clients' age (aRR:~0.9) but was higher among group-counselled than individually-counselled (aRR:1.16). Counseling by male peers (aRR:0.77) and rural location (aRR:0.61) reduced the risks of non-referral for VMMC while age increased it (aRR $\geq$ 1.59). Receipt of services was high at 64-80% except for those referred for STIs (39%). Group counseling and rural location (aRR:~0.52) and male peer educators (aRR:0.76) reduced risk of non-receipt of VMMC. Rural location increased risk of non-receipt of contraception (aRR:3.18) while marriage reduced it (aRR:0.20).

**Conclusions and Recommendations:** This study found moderate levels of referrals with variations by service types but high levels of receipt of services among referred young people. Type of counselling, gender of peer educators and location affected receipt of services. To enhance the output of peer educators, there is need to further understand the reasons for non-referrals and non-receipt of services using qualitative approaches.



## FRPEC097

### Improving HIV Partner Testing in a Refugee Emergency: Case Study of Nyarugusu Refugee Camp in the Republic of Tanzania

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**Background:** Nyarugusu camp hosts over 145,260 refugees (male: 49.5% & female: 50.5%) from Congo-DRC and Burundi. HIV services including PMTCT are available. In the period b/w Jan 2017 to June 2019, 3,407 men and 3,536 women consented to HIV counseling and testing (HIV C&T): respectively 1.5% (M) and 2.2% (F) tested positive for HIV. As of June 2019, there are 724(72%F/28%M) PLHIV. With 90-90-90 goals in sight, it is important to improve the effectiveness of HIV C&T services. Male involvement in HIV testing as part of ANC remains a challenge in this context despite evidence showing that knowing their HIV status during and after pregnancy as well as their influence on women's health-seeking behavior improves health outcomes of both infants and their mothers. The project therefore made a consolidated effort to increase HIV C&T as part of ANC consultation amongst women as well as improve male partner testing.

**Methods:** Combined interventions were organized and included invitation of males through their pregnant partner to attend the next ANC visit, targeted sessions with male partners of pregnant women through routine household visits by community health workers (CHW) to discuss importance of partner testing, engagement of the community leaders in developing strategies to enhance community support for partner testing and provision of competency-based trainings to facility-based health care providers on couples counseling as well as CHWs on delivery of appropriate messaging at the community level.

**Results:** In 2018 3,238 pregnant women attending their 1st ANC visit were counseled and tested for HIV; 11 tested positive representing 0.3% prevalence rate of which all (100%) were linked and started on ART. Of the total pregnant women that were tested and asked to bring their partners, 83% of their partners were tested for HIV; 6 male partners tested positive representing 0.2% prevalence rate. Over the past 3 years, the percentage of pregnant women accepting testing in ANC has increased from 73% to 95%. The proportion of men accompanying their pregnant partner for HIV testing has improved from an annual average of 35% in 2017, 75% in 2018 and 83% in the 1st 6 months of 2019. In this period, a total of 10,592 male partners were tested, of whom 41 (0.4%) tested positive and 93% were put on treatment.

**Conclusions and Recommendations:** This strategy has proven to be feasible, acceptable and effective in increasing partner HIV testing, referral and follow-up in this context.

## FRPEC098

### **Sexual and Reproductive Health Integration in HIV Program: Review of Cervical Cancer Screening for HIV Positive Women in Southern Nigeria**

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**Issues:** Global burden of cervical cancer (CaCx) is very high and inequitably distributed, estimated 528,000 women diagnosed each year and 266,000 die of the disease. Sadly, 85% of these women are in developing countries<sup>1</sup>. The early stage of this cancer, cervical intra epithelial neoplasia, (CIN) is treatable and easily detected by screening. The incidence of CIN, as confirmed by colposcopy, is 4 to 5 times higher in HIV-infected women and adolescents compared to HIV-negative women and adolescents with high-risk sexual behaviors<sup>2</sup>. HIV positive women have a higher persistence of HPV infection which causes most types of CaCx. Integration of cervical screening in the HIV program is life saving for the HIV positive woman and is an effective way of improving access to CaCx screening. The study reviewed electronic medical record for screening services of women of reproductive age (15 to 49 years) living with HIV in South-South (SS) and South-East (SE) Nigeria as a prevention strategy against CaCx.

**Descriptions:** This is a cross sectional review of HIV programs, and its level of integration of CaCx services for HIV positive women in SS and SE Nigeria from 2017 to 2019. Data from electronic medical records (EMR) of HIV positive women and adolescents in HIV and antenatal clinics of 6 high volume sites (3 per zone) in Imo and Rivers State representing the 2 zones were analyzed for cax screening. Data was analyzed using statistical analytic techniques (SPSS and Power BI). The standard National tools used in the program were reviewed for required parameters and fields for complete service delivery.

**Lessons learned:** A total of 7,643 women were on ART in the 2 zones, 6476 (85%) were of reproductive age, (40% SE and 60% SS) of which 133 (2%) were adolescents (46% SE and 54% SS). There was no documented evidence of CaCx screening service offered to any of the HIV positive women. This potentially exposed all the HIV positive women to risk of developing cax without intervention. The program tools do not have any column for documentation of cax services.

**Next steps:** The study brings to the fore the urgent need for cax screening among HIV positive women to determine those who already have cax at its different stages and place them on appropriate treatment to decrease the mortality. Integration of cervical cancer screening into HIV program will improve the quality of life of these women, who by virtue of benefiting from antiretroviral therapy have increased life expectancy.

## FRPEC099

### Benefits and Challenges of Safer-conception Counseling (SCC) for HIV Serodiscordant Couples in Uganda

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**Background:** Across sub-Saharan Africa (SSA) reproductive health and family planning (FP) are being integrated into HIV care, but safer conception services are largely absent. Until recently, providers have dissuaded (and stigmatized) childbearing among people living with HIV (PLH) (~60% of HIV-affected couples in Uganda are serodiscordant). 20-50% of PLH in SSA wish to conceive; up to 40% of HIV+ women become pregnant post-HIV diagnosis; half of these pregnancies are planned, highlighting the need for FP to include safer conception counseling (SCC).

**Methods:** We report on a 3-arm RCT comparing (1) FP with a multi-component enhanced SCC intervention including motivational interviewing (MI) vs (2) an SCC workshop for FP nurses, and (3) usual care FP at TASO Uganda HIV clinics (2 sites per arm). 389 clients in serodiscordant relationships expressing childbearing desire were enrolled and followed for 12 months or to pregnancy. We conducted interviews with 36 providers at 6 clinics to assess the effectiveness of each SCC training approach on FP and SC knowledge and skills of HIV providers. Content analysis was used to identify themes related to the benefits and challenges of the different approaches.

**Results:** 26/36 providers reported the training increased their knowledge of SC and FP for couples affected by HIV. 12/14 providers in the enhanced SCC1 reported the training deepened their understanding of SC options; 8/12 providers in SCC2, and 2/11 in the usual FP care reported increased knowledge of SC. Providers receiving MI in SCC1 reported learning to present information in a non-judgmental way and being sensitive to stigma. Providers in SCC2 did not report attitudinal changes, instead they focused on clients' fears as did providers in usual FP care. Stigma and fear of disclosure remain barriers to engagement in care, especially for male partners. Some providers felt that SCC could address these challenges and reduce transmission to partners and children. 21/36 providers saw SCC as beneficial to ensure conception and birth of healthy HIV- babies; only 7/36 cited SCC as beneficial to prevent HIV transmission to partners.

**Conclusions:** MI is critical in training providers to counsel couples in a non-judgmental way. SCC can draw men into care and can benefit clients whose partners are not in care. Providers need to be more aware of the benefits of SCC to prevent HIV in partners.

## **FRPEC100**

### **How Integration of HIV and SRHR in Outreaches Has Increased Uptake of Services amongst Key Populations**

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**Issues:** Key populations (KPS) often face significant challenges in accessing HIV care and treatment due to stigma, discrimination and ignorance. In many countries including Uganda where certain sexual identifications and practices are criminalized, additional barriers are created by individuals' own fears of stigma, abuse, harassment and legal consequences. To improve access and uptake of HIV and SRHR services by key populations in Uganda, Alive Medical Services (AMS), a non-profit organization located in Kampala, offers free comprehensive HIV and SRHR Services to all with a focus on the key populations.

**Descriptions:** AMS has integrated HIV/SRHR services with community dialogues in outreach activities for KPs to increase access to services while promoting behavioural change. A peer-to-peer model is used in organising outreaches in hot spots and drop-in centres. Through the dialogues, participants engage in constructive conversations about HIV/AIDS promoting mutual understanding of the HIV epidemic and its prevention and control in the community. Innovative ideas and solutions are discussed and action plans made. Then participants receive free access to HIV prevention and treatment services including testing, starter packs for those found positive, condoms, lubricants, PrEP, Hepatitis B testing and vaccination, STI screening and treatment and family planning services.

AMS' KP client base has increased from just 8 in 2015 to 2,077 clients in June 2019 receiving tailored services among which 35 are HIV positive and active in care with a 99% retention rate. Over 700 have been tested and vaccinated for Hepatitis B, 46 received PEP and PrEP, 463 have received screening, testing and treatment for other STIs, and over 300 self-testing kits have been distributed to members of key populations. Between January-June 2019, integrated outreaches have served 333 MSM, 112 Transgender, 107 female sex workers, in hot spots or drop in centres. 95% of clients served during targeted outreaches have turned up at the facility to access further treatment and other comprehensive packages.

**Lessons learned:** Integrated services in outreach activities for key populations increases not only access to HIV and SRHR services but also confidence in the friendliness of health services thus bridging the gap.

**Next steps:** Scaling up of this integrated outreach model to other districts and disseminating it for adoption by other health facilities to improve on their Key population programming.

## **FRPEC101**

### **HIV Sexual Transmission Risk Behavior in Middle Aged and Older HIV-infected Adults in Botswana: A Population Based Bio-behavioral Survey**

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**Background:** The roll out of antiretroviral therapy (ART) in Botswana has significantly increased life expectancy of people living with HIV (PLWH) making older infected adults the fastest increasing proportion of PLWH. Much is known about the HIV transmission or acquisition risk in the younger and older general population. Much less is known about sexual HIV transmission and acquisition risks in middle aged and older HIV - infected adults in Botswana hence their specific needs for prevention of HIV transmission or re-infection are not known, as data is not readily available.

**Methods:** A cross-sectional design utilizing population based bio-behavioral data collected by Botswana AIDS Impact Survey by the National AIDS Coordinating Agency (NACA). The study targeted participants aged 10 - 64 years and data was collected on socio-demographic, behavioral and biological characteristics. Descriptive statistics were used to measure frequencies. Adjusted multivariable logistic regression model was then used to establish association between inconsistent condom use and demographic and behavioural factors.

**Results:** A total of 2140 participants were in the study age cohort (40 - 64 years) and 1165 (54.4 %) were females while 975 (45.6%) males. A total of 1040 (69.6%) participants tested HIV negative with a self - reported HIV negative while 104 (7%) tested HIV positive with a self - reported HIV negative status; 330 (22.1%) tested HIV positive with a self - reported HIV positive status. Only 20 (1.3%) were HIV positive with an unknown self - reported status. At least 467 (80.9%) HIV negative with a self reported HIV negative status were inconsistent in condom use while those who were HIV positive with self-reported HIV positive status only 64 (11.1%) were inconsistent ( $p = < 0.001$ ). Fewer HIV infected middle aged and older adults 27(32.9%) had two (2) or more sexual partners than their HIV uninfected counterparts 55 (49.1%), ( $P = 0.003$ ). Factors associated with inconsistent condom use in HIV infected middle aged and older adults were: being single (aOR = 2.276; 95% CI = 0.439 - 11.796;  $P = 0.027$ ) and STIs symptoms (aOR = 2.331; 95% CI = 0.743 - 7.317;  $P = 0.014$ ).

**Conclusions and Recommendations:** There is a high rate of HIV acquisition and transmission risk behavior in both HIV infected and uninfected middle aged and older adults in Botswana. It is therefore important to develop age specific primary and secondary prevention strategies targeting the older generation.

## FRPEC102

### Modeling Analysis for HIV Risks among Ever Cohabitated Couples in Rwanda Using (RDHS2015), Rwanda

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**Background:** Cohabitation couples with HIV positive represent a highest prevalence compare to the national level population prevalence, the latest survey (RDHS 2015) indicate 3% in Rwanda while this analysis indicate 5% among all cohabitated couples in general. The (RDHS 2015). The question ask the first month of first cohabitation was used as the filter to select the total population ever cohabitated. However some variables were used to make a good model related also to their behavior, not only social demographic characteristics or social economic.

**Methods:** RDHS 2015 was a cross-sectional design with nationally representative study design chosen because it does not allow for any manipulation of factors and provides population characteristics as they are at one point in time. The 2014-15 RDHS followed a two-stage sample design and was intended to allow estimates of key indicators at the national level. Because we are only interested on ever Cohabitated couples HIV status, we only considered a total of 4810 peoples for the analysis. The Logistic regression models were used to identify different factors associated with HIV status among ever cohabitation couples.

**Results:** Of 4810 cohabitated peoples interviewed, the overall, 5% of respondents were infected with HIV, the figure indicate that more times spend in cohabitation more increase the number of infected. The highest HIV infection increase was in 14-19 years duration group with 6.1 % was infected peoples. Factors associated with HIV- among ever cohabitation couples with their age at first sex, where at 6 years old (AOR 9.33, 95% CI: 2.9-41.59;  $p < 0.05$ ), or at 18 years age old as their age at first sex (AOR 3.77, 95% CI: 1.22-11.6;  $p < 0.05$ ). However the increasing number of infected peoples with only the primary school education level (AOR 4.905, 95% CI: 1.23-19.5;  $p < 0.05$ ), and lack of information access on the frequency of listening to radio (AOR 1.58, 95% CI: 1.15-2.24;  $p = 0.01$ ).

**Conclusions:** Couple prevention interventions should begin early in relationships with Rwandan Government and other stakeholders to reach the cohabitated couples with comprehensive stigma free sexual reproductive health information and services. Also to remove all legal barriers that could set any barrier to young peoples and vulnerable population on the access of sexual reproductive health information.

**Keywords:** Cohabitated peoples, HIV, RDHS 2015, sexual reproductive health

## **FRPEC103**

### **Benefits of Integration of HIV and SRH Services at Facility Level in Onandjokwe District, Oshikoto Region, Namibia**

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**Background:** The Onandjokwe District scaled up the provision of integrated SRH and HIV services in all its health facilities. Before integration services were provided in different days, by different providers, at different hours and consulting rooms. Based on the findings of the baseline assessment and time motion study a people-centred integrated model was implemented in the district and all services were provided in the same room by the same nurse/provider on the same day.

**Methods:** Facility data generated from facility records in Onandjokwe district, prior to integration and after integration was reviewed, staff members were trained on both HIV and SRH services. Facilities were rearranged to provide integrated services in a one stop model, community members were also sensitized on the provision and access of integrated services through community meetings. There are no longer specific rooms for HIV/SRH services but general screening rooms which provide all services. The pharmacy department also integrated and currently dispenses 1st line ART drugs in each screening room.

**Results:** The Onandjokwe district focused on integration of HIV into other health services, as a result, nurses' knowledge and skills in the provision of HIV related services increased from 16% to 100%, (12 nurses in a facilities are currently, able to provide HIV related services, compared to 2 nurses who were only able to provide the services before.) This also benefited the outreach services as all nurses are currently able to provide HIV services. Accessibility of HIV and SRH services by clients improved from 40% to 100 %. Currently, there is no more ART department or room and patient care booklets are no longer carried around and this has contributed greatly to stigma reduction. There is an increase of HIV clients accessing other services such as family planning and Pap smear, 28% of HIV clients are now accessing first ANC visit and ART services same day. STI screening and treatment, condom distribution and emergency contraceptive are available in all screening room, which improves accessibility of services to HIV clients. Community members are positive about the patient centred model.

**Conclusions:** The "patient-centred integrated model" improved health outcomes for clients. Provision of integrated services has improved the knowledge of staff on HIV and SRH services. Integration has remarkably reduced patients waiting times as well as stigma both at screening rooms and at the pharmacy.

## FRPEC106

### Surge Campaign an Ambitious Strategy to Achieve UNAIDS 90-90-90 (2018)-Lessons from TASO Rukungiri Surge Campaign Implementation

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**Issue:** While there have been increased efforts to scale up treatment initiatives in Uganda there are still many people living with HIV who do not have access to the medicines they need. (UNAIDS2018). Surge campaign is a strategy by United States President's Emergency Plan for AIDS Relief (PEPFAR) to achieve HIV epidemic control in Uganda by 2020 i.e.90-90-90. Currently, Uganda's 90-90-90 statistics indicate that out of an estimated population of 3million people living with HIV, only 71% of people are aware of their HIV status, while 88% are on treatment and 89% are virally suppressed.

**Description:** At TASO Rukungiri we embraced different surge strategies that were bringing yield to achieve the 1st 90. We implemented Assisted Partner Notification (APN), Index case testing, Bar to Bar and moonlight clinic approaches. Paired teams of health workers were involved and HIV starter pack in place so that those identified linked to care at point of testing. The campaign implemented Differentiated Service Delivery(DSD) approaches targeting key and priority populations to better serve their needs and ensure retention in care.

**Lessons Learnt:** Between March 2018 and December 2018, 619(300F, 319M) HIV+ index-cases were identified from the different testing approaches employed under surge strategy. 44 partners of index cases were followed up using Assisted Partner Notification(APN) and a yield of 16(36.4%) realised. 616(99.5%) were linked to care at TASO Rukungiri, 1 referred for linkage to other facility while 2 declined to start ART and are still being followed up. APN strategy yielded most with an average HIV yield of 36.4% more than all other approaches employed in surge campaign. Retention stands at 88 % with 60 transferred out,13 Deaths, 60 transferred out of which 20 are self transfers.

**Next steps:** Surge campaign strategy is enables identification of new HIV positives, ensuring linkage to treatment initiation and suppression of Viral Load. There is need to intensify on what works in identifying new cases in order to realise the 95% on 1st 90 like APN, Index case testing and KP/PPs testing.



## **FRPEC107**

### **Targeting Males in Sporting Events for HIV Testing: The Experience of the Tour du Rwanda**

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**Issues:** Across different geographic and epidemic settings, men are less likely than women to take an HIV test, resulting in a gender gap in the first UNAIDS 90%. This has been confirmed in recent Population based HIV Impact assessments (PHIA) done in eleven Sub-Saharan African countries where the percentage of men HIV+ aware of their status was 8 points below the one in women HIV+. In Rwanda this gap was 5% in the last Demographic and Health survey (DHS 2014). AIDS Healthcare Foundation (AHF) supports HIV testing services (HTS) in 30 facilities in Rwanda, with over 320,000 tests done in 2018, 53% in males. In order to increase HIV testing in men, AHF started supporting HIV testing in events that attract a predominantly male crowd like the "Tour du Rwanda" (TdR) cycling race

**Descriptions:** Following the itinerary of the Tour de Rwanda 2018, health teams from eight health centers/district hospitals were selected to conduct outreach HIV testing and surgical Voluntary medical male circumcision (VMMC) with the support of Rwanda Biomedical Center and AHF. The activity was conducted during the four days prior to the arrival of the competition to each locality plus the day of the race in tents set up besides the stage finish line

**Lessons learned:** 2,686 clients were tested during the HIV Prevention activities organized around the TdR between 3 and 11 August 2018, with 1,062 individuals tested the day of the competition. On that day, male clients represented 76% of all tested (ranging from 60 to 94% depending on the location) with a median age of 26 years. Additionally 1,346 adolescents and young men were circumcised during the 9-days activity and over 86,000 condoms were distributed.

**Next steps:** Uptake of HIV prevention activities in adolescents and young men around a highly popular cycling race in Rwanda was high. Contribution of men to HIV testing numbers (76%) was much higher than the average in testing activities conducted by AHF and other organizations. Targeting sporting events that attract male fans can be an approach to reduce current gender gap in the first 90%

## FRPEC108

### Is HIV Self-testing a Strategy to Increase Repeat Testing among Pregnant and Postpartum Women? A Pilot Evaluation in Kenya

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**Background:** Repeat HIV testing among pregnant and postpartum women is important for identification of incident HIV infections and subsequent HIV treatment and prevention interventions. Facility based HIV testing is conventionally offered through provider-initiated testing and counselling (PITC) but with the introduction of HIV self-testing (HIVST), that approach could provide a user-friendly, time-saving alternative.

**Methods:** We conducted a pilot evaluation of HIVST for pregnant and postpartum women within three health facilities in Kisumu, Kenya. We offered 400 pregnant and postpartum women who had previously tested HIV seronegative the opportunity to choose between clinic-based oral HIVST and standard finger prick based PITC for repeat HIV testing. We estimated the frequency of each choice, and described the participants' reasons for and experiences with the choices, as well as preferences for future testing. We conducted a log binomial regression to identify predictors of choice for repeat HIV testing and a 2-sample test for equality of proportions of experiences and decisions between the HIVST and PITC groups.

**Results:** The median age was 23 (interquartile range 20-28) years. More than three quarters (313/400, 78.3%) were married and few (17/400, 4.3%) had their first pregnancy during the study. Just over half 53.8% (95% CI: 48.7, 58.7) chose oral HIVST. Unmarried women were more likely to use HIVST (PR: 1.26, 95% CI 1.01 - 1.57). The most frequent reason for choice of oral HIVST was fear of needle prick (101/215, 47%) while the largest group of PITC users (79/185, 42.7%) had no reason for making their choice. More HIVST than PITC users indicated lack of pain (99.1% vs 34.6%,  $p < 0.001$ ) and having to ask for help (18.1% vs 1.1%,  $p < 0.001$ ) as reflective of their HIV testing experiences. Fewer HIVST than PITC users (82.8% vs 90.8%,  $p = 0.03$ ) indicated that their test of choice was quick to conduct. More HIVST than PITC users (95.3% vs 48.1%,  $p < 0.001$ ) would use the same testing approach in future and most HIVST users (94.9% vs 41.6%,  $p < 0.001$ ) would recommend their test of choice to other women.

**Conclusions and recommendations:** In this pilot evaluation, the use of HIVST in Kenyan antenatal and postpartum clinics appears to be feasible and acceptable for repeat HIV testing. Future work should explore the practical mechanisms for implementing such a strategy and evaluating its cost effectiveness.

## FRPEC109

### Community and Facility-based HIV Testing and Linkage to Antiretroviral Therapy: Positive Lessons from a Public Health Campaign

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**Issues:** HIV testing rates in Cote d'Ivoire are relatively low and many individuals do not know their HIV status. We described the effects of an HIV testing and linkage to antiretroviral therapy (ART) campaign jointly organized by Health Alliance International (HAI) and the Ministry of Health in four regions in Northern Cote d'Ivoire.

**Description:** In FY2018 Q2, HAI organized meetings with district health management teams (DHMTs) in project regions to define the objectives road map for the campaign. Health care workers were sensitized, trained and motivated to participate in the campaign. HIV testing was carried out at 234 health facilities and peripheral communities and HIV positive cases were initiated on ART. Collaboration was reinforced between HAI staff and community-based organizations operating within HAI-supported regions. There was joint supervision between HAI staff and DHMTs at facility and community-level and adequate resources (telephone credits, HIV testing registers and HIV testing commodities) were made available to staff involved in the campaign. HIV testing and linkage data were collected and reported daily in an online platform and dashboards were generated. Daily evaluation meetings were held to assess progress and corrective actions were taken.

**Lessons learned:** The campaign led to a substantial improvement in HIV testing outcomes and linkage to care. The number of individuals who received HIV testing increased by 68% from 48,541 in FY2018 Q1 to 81,602 in FY2018 Q2. The number of HIV-positive individuals diagnosed increased by 90% from 1,540 in FY2018 Q1 to 2,961 in FY2018 Q2. The positivity rate from HIV index testing increased from 8% to 13%. Women significantly tested HIV positive compared to men (66.7% vs 33.3%,  $p < 0.001$ ). The number of HIV-positive individuals initiated on ART increased by 101% from 1,928 in FY2018 Q1 to 3,883 in FY2018 Q2. Of the 3,883 patients initiated on treatment, 76.3% ( $n=2,961$ ) tested HIV-positive at a health facility, 6.9% tested HIV in the community and 16.9% were pre-ART patients who were initiated on ART. Overall, the majority (81.0%) of HIV positive individuals received same-day ART initiation.

**Next steps:** Active involvement of both facility and community-based health care workers is critical in achieving HIV testing and linkage to ART outcomes. Our goal is to optimize retention in care among those who were linked on treatment.

## FRPEC110

### Évaluation des Performances du Test de Dépistage Rapide sur Fluide Salivaire ORAQUICK (Autotest HIV) au Bénin

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**Introduction:** Le Bénin à l'image des autres pays de la sous région est à 65% pour le 1er 90 en 2018 qui constitue la porte d'entrée de toute PEC. Le dépistage démedicalisé est une approche et l'autotest est attendu dans ce domaine pour contribuer à améliorer cet indicateur d'où cette étude dont l'objectif principal est d'évaluer la performance du test rapide immuno chromatographique ORAQUICK (autotest du VIH) pour le diagnostic du VIH sur la salive en vue de son insertion dans l'algorithme de dépistage du VIH au Bénin.

**Méthodes:** Etude transversale du 1<sup>er</sup> Avril au 30 juin 2019 ayant enrôlé 398 sujets reçus sur trois sites de dépistage (Labo de référence, Dispensaire IST, ONG Racines). Les sujets provenaient de la population générale, les PS et les HSH. Un consentement des sujets a été recueilli avant leur enrôlement. Ainsi tous les participants ont été soumis au test salivaire et à un prélèvement sanguin pour l'évaluation avec des réactifs de référence. Les informations sociodémographiques telles que l'âge, le sexe et le type de population ont été collectées. La performance du réactif à l'étude a été comparée à l'algorithme national utilisé au Bénin (Murex Ag/Ab, First Response puis INNOLIA pour un statut définitif).

**Résultats:** La population générale était majoritaire (67%,) suivie des PS (22%) puis les HSH (11%). Au sein de notre population, 247 soit 63% étaient de sexe féminin et 145 (37%) de sexe masculin. L'âge moyen était de 31 ans, [ 12-76 ans].

Au total 137(35%) participants étaient positifs selon l'algorithme national contre 254 négatifs (65%) pour le VIH. Les performances du test ORAQUICK (autotest HIV) se présentent comme suit : Sensibilité du test ORAQUICK (Autotest HIV) est de 99,27% (IC à 95% =[98,4% ; 100%] ) et la spécificité est de 100%.

Aucun faux positif n'a été enregistré avec le réactif en évaluation.

Les valeurs prédictives positive et négative sont respectivement 100% et 99,61% (IC 95%=[99,0% ; 100%]).

**Conclusions et Recommandations:** Le réactif ORAQUICK (Autotest HIV), présente de bonnes caractéristiques générales des TDR . Il répond aux performances requises par l'OMS en matière de performances eu égard aux résultats des tests effectués.

Ainsi, il peut être proposé dans l'algorithme de dépistage du VIH au Bénin comme approche alternative et complémentaire des stratégies habituelles conformément à la démarche retenue dans le document de stratégies nationales de dépistage démedicalisé

## **FRPEC111**

### **Impact of Integrated HIV Testing Services on Finding Positives in Zimbabwe**

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**Issues:** As Zimbabwe is nearing the HIV epidemic control, identification of new HIV cases requires more innovative case finding approaches. About 72.9% of people living with HIV aged 15 to 64 years report knowing their HIV status (Zim PHIA, 2016). While this is high, it is below the 95% target for HIV status awareness. Thus, HIV diagnosis remains one of the main challenges for Zimbabwe to achieve the 95-95-95 targets.

**Descriptions:** To address aforementioned issue, PSI-Zimbabwe with its implementing partners intensified both community and facility index testing in October 2018. To facilitate implementation with fidelity, training of both technical and community outreach workers was done on index testing. In this context, an index is defined as an HIV positive individual either the newly diagnosed or virally unsuppressed and biological children. The HIV positive client is placed at the center of HIV case-finding by exploring the sexual networks beyond the primary sexual partner. Index testing was implemented in 16 districts of Zimbabwe and program data collation was done through dhis2, and the index testing register to track the HIV positives identified, contacts elicited and linked to HIV care. To improve ART initiation for clients in hard to reach areas, community index testers were deployed to do community ART initiation and eventually facilitate linkage to the nearest health facility. In addition to this, a Standard Operation Procedure Manual was developed to increase efficiency and handover takeover of contacts for testing from facilities for testing in the community.

**Lessons learned:** A total of 35 535 clients were tested through Provider Delivery HIV Testing Services (PDHTS) throughout the network (Figure 1). Of these, 10 582 tested HIV positive, an average HIV yield of 30% was observed. The contribution of index testing to the overall HIV case finding increased from 36% in October 2018 to 76% in June 2019. The overall linkage to ART was over 90% for the period October 2018 to May 2019. We learned that case identification through index testing increased over time as providers improved the quality of contacts.

**Next steps:** We learned that Index testing enhances finding HIV positives. To this end index testing should be scaled with training on generating quality contacts. To support this standard operating procedure manual should be developed followed by training of counsellors to facilitate implementation with fidelity.

## FRPEC112

### Improving HIV Positivity Rate and Linkage to Care and Treatment through Index Partner Testing (IPT) among Men who Have Sex with Men (MSM) in Ghana

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**Issues:** Identification of Men who have Sex with Men (MSM) who are living with HIV and linking them to treatment is low in Ghana. The use of alternative testing strategies to identify HIV positive MSM is crucial to increasing HIV+ yield since the traditional peer education referral of MSM have produced low yield. We describe the successful implementation of index partner testing strategy to increase the identification of HIV+ MSM and linkage to treatment in the Ningo district of Ghana.

**Descriptions:** Index partner testing (IPT) uses MSM diagnosed with HIV (index client) to link their sexual partners within the past year to a trained counselor to provide HTS. New HIV positives identified through Index testing were then enrolled on treatment to keep them healthy and reduce risk of infecting other sexual partners. Sexual partners who were diagnosed HIV negative were also provided HIV prevention services to help them remain HIV negative.

The IPT strategy for MSM was applied in two ways in the 2<sup>nd</sup> quarter of 2019. In the first approach, MSM diagnosed HIV+ informed their sexual partners about their HIV status and encouraged them to come to the health facility for an HIV test. With the second approach, with the consent of the HIV+ index client, the counselor directly called and/or visited the clients' partners and informed them about the need for HIV test and offered them HTS whilst maintaining confidentiality of the index client.

**Lessons learned:** The introduction of IPT strategy among MSM increased HIV+ yield and linkage to ART among index clients and their sexual partners compared to the traditional peer referral of MSM. In the 1<sup>st</sup> quarter of 2019, 281 MSM were tested using traditional peer referral approach; 17 MSM (6.0% HIV+ yield) were diagnosed positive and 11 were linked to ART (64% linkage rate). In the 2<sup>nd</sup> quarter, 113 MSM were tested using index testing of HIV+ MSM sexual partners; 22 MSM (19.5% HIV+ yield) were diagnosed positive and 20 were enrolled on ART (91% linkage rate).

**Next steps:** Index HIV testing strategy shows high potential to improve ART coverage in MSM through timely diagnoses and linkage to treatment. Therefore, this strategy should be implemented in other KP intervention sites.

Applying index testing can be viable to identify and link high risk MSM living with HIV to care and treatment. As a next step, we will explore which of the approaches of index testing is more viable in achieving greater HIV+ yield and linkage to treatment.

## FRPEC113

### Réduction des Barrières au Test de Dépistage du VIH Chez les Populations Vulnérables: Une Contribution de l'Observatoire Communautaire de ITPC dans l'Atteinte du Premier 90 en 2020 en Côte d'Ivoire

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**Issues:** La Côte d'Ivoire reste l'un des pays le plus marqué en Afrique francophone par le VIH avec une prévalence estimée à 3,7%. Aussi, le niveau de réalisation du premier 90 est de 59%. Ces gaps, soulèvent des préoccupations quant à l'atteinte du premier 90 par le pays en 2020. Pour ainsi dire, les stratégies entreprises pour améliorer le taux de dépistage, continuent de se heurter à de nombreuses barrières.

**Descriptions:** Le Réseau Ivoirien des organisations de Personnes vivant avec le VIH (RIP+) à travers l'Observatoire Communautaire sur le Traitement du VIH, initié par ITPC et financé par le Fonds Mondial a œuvré à l'identification de ces barrières chez les populations vulnérables au VIH, afin de contribuer à améliorer le taux de dépistage pour l'atteinte du premier 90 en Côte en 2020. Ce faisant, une étude transversale au cours de la période de juillet à septembre 2018 a été réalisée, avec une collecte qualitative de données, au niveau de 4 types de populations vulnérables (HSH, TS, femmes enceintes et jeunes âgés de 15 à 24 ans).

**Lessons learned:** Durant la période 411 interviews et 04 focus group d'au moins 08 personnes ont été réalisés auprès des 4 types de populations au sein de 27 centres de santé répartis dans 05 régions sanitaires à forte prévalence du VIH. Il est ressorti que 36% des personnes interrogées ont déclaré qu'elles préfèrent ne pas connaître leur statut sérologique, pour des raisons liées à la forte stigmatisation des PVVIH. 19% ne voient pas l'intérêt du test de dépistage, vu que la maladie reste incurable. 13% des participants ont signifié avoir un problème de motivation, 9% ont dit avoir un manque de connaissance sur le test de dépistage, 4% ont estimé que les centres de dépistage étaient trop éloignés. En outre, plus de la moitié des participants aux focus group ont estimé que les campagnes de communication sur le dépistage avaient baissé.

**Next steps:** Cette étude a permis d'identifier des barrières à la mobilisation des populations vers le test de dépistage du VIH et des moyens de contribuer à les réduire. Le RIP+ par le plaidoyer a convaincu le Programme National de Lutte contre le Sida pour l'élaboration d'un plan de communication sur le dépistage, dont le processus est en cours, afin de contribuer à accroître la demande et le taux de dépistage afin de réduire les écarts au niveau national.

## **FRPEC114**

### **Provision of Alternative Health Services Critical for Increasing HIV Testing Rates in the Shama District of Ghana**

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**Issues:** Uptake of HIV testing services (HTS) among the general population in the Shama district of Ghana is low. The provision of other health services is critical to increasing HIV testing rates since community outreach HTS have produced low testing rates due to stigma, discrimination and low comprehensive knowledge on HIV. This abstract report on the uptake of HIV testing services as a result of providing communities with alternative health services along with HIV testing services.

**Descriptions:** In the third quarter of 2018, the District AIDS Committee (DAC) of the Shama District introduced alternative health services into their quarterly community HTS outreach programs. The DAC mobilized trained nurses to provide other health services such as Hepatitis B screening, Blood pressure screening and breast cancer screening in 5 communities. Nurses provided the communities with education on HIV, provided counselling and offered HIV test along with other health screening services. Traditional and community leaders were engaged to support advocacy for HIV testing and stigma reduction.

**Lessons learned:** Trends from DAC Annual HIV report show that uptake of HIV testing services increased after the provision of alternative health services. In the first and second quarters of 2018, 150 males and 231 females accessed HTS. 3 males and 8 females were diagnosed positive respectively. In the third and fourth quarters of 2018 after the introduction of alternative health services, 217 males and 387 females accessed HTS. 6 males and 13 females were diagnosed positive and subsequently enrolled on treatment. Follow ups were made to ensure retention and viral suppression.

**Next steps:** The provision of alternative health services is feasible hence the government of Ghana should consider that as a strategy to increase HIV testing rates among the general population. Integration of other health services into HIV programs should be used as a strategy of reaching the hard-to-reach population as it may help in identifying more HIV positives.



## FRPEC115

### Reaching Undiagnosed HIV Positive Children through Family-based Index Testing: The Role of Community Health Nurses in the Greater Accra Region of Ghana

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**Issues:** Delaying antiretroviral initiation for HIV infected children is known to cause poor survival. Ghana's highest treatment coverage for children (0-14 years) has however been 23% over the past five years mainly due to low case detection and initiation rates. With over 90% of infected children acquiring the infection perinatally, and a significant proportion missing the opportunity for early infant diagnosis, family-based index testing (FBIT) is an important intervention to help reach undiagnosed children. School schedules of listed children, as well as time and monetary costs, are known barriers to getting children of FBIT consenting clients tested in health facilities, leading to low testing coverages. Ghana Health Service, however, has a cadre of staff known as the Community Health Nurses (CHN), who serve as a link between health facilities and communities. This review seeks to assess the impact of these nurses on reaching children listed by index clients.

**Description:** Maamobi General Hospital (MGH) and Achimota Hospital (AH) are antiretroviral service facilities in the Greater Accra Region of Ghana. They were oriented on FBIT in December 2018. In the first quarter of 2019, MGH did both facility and community testing using the CHNs, unlike AH that did only facility testing. Routine FBIT data from these facilities were collected and analysed using the FBIT monitoring framework developed by UNICEF.

**Lessons learned:** There was no significant difference in FBIT acceptance rates among clients from both facilities (difference(dif)=1%, 95% CI=-24.6%-25.6%, p=0.9395). Consenting clients listed 63 children in MGH and 44 in AH. A significantly higher proportion of listed children were contacted at MGH than at AH (df=31%, 95% CI= 16.6%- 45.9%, p< 0.0001) and MGH had a significantly higher testing coverage for those contacted (dif=14%, 95%CI=1.7%-31.4%, p=0.012). Though AH had a higher testing yield and initiated all their positives, there was no significant difference in the yield (dif=8%, 95% CI=-9.1%-29.2%, p=0.3999) and initiation rates (dif=18%, 95% CI=-23.1%-47.5%, P=0.2835) between the two facilities. Therefore, the involvement of CHNs improved the contact rate and testing coverage for the listed children.

**Next steps:** CHNs need to be engaged in the orientation sessions for the scale-up of FBIT, to take advantage of their dual role as health workers and community actors to improve paediatric HIV outcomes.

**Keywords:** Pediatric HIV, diagnosis, initiation

## FRPEC116

### Achieving Epidemic Control of HIV in Ghana: Evaluation of the Impact of Family-based Index Testing Beyond the Yield

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**Issues:** Ghana's low coverage of the 90-90-90 targets as at December 2018 is largely due to low targeted testing and linkage rates as well as failure to reach and initiate persons who were in clinical care prior to the implementation of the treat all policy. A high HIV incidence, driven by sexual transmission, also makes the targeted 75% reduction in new infections by 2020 challenging. To address these, family-based index testing (FBIT) was piloted. Beyond the yield, we report its possible role in breaking the chain of HIV transmission.

**Description:** Service providers from 40 facilities in five high burden regions were oriented on FBIT in December 2018. Their FBIT data for the first quarter of 2019 was analyzed using an adapted version of the FBIT monitoring framework developed by UNICEF.

**Lessons learned:** The FBIT acceptance rate across the regions was 78% with a contact elicitation rate of 1:1.8. Of the contacts reached, 86% were tested and a yield of 24% recorded (children and partners), which was significantly greater than the provider-initiated testing and counseling (PITC) yield (difference (dif)=19%, 95%CI=16.6%-22.5%,  $p < 0.0001$ ). Compared to PITC initiation rates, a significant proportion of the positives (94%) were initiated on ARVs (dif=52%, 95%CI=48%-55%,  $p < 0.0001$ ).

Seven hundred and eighty-nine (789) of the contacts listed were partners of index clients, out of which 463 were reached. At the time of contact, 116 partners (of which 70% were male) knew they were infected with 18 of them already receiving ARVs. Of the remaining 98 who were not on treatment, majority (79%) were diagnosed prior to treat all policy implementation and the remaining either in denial or seeking alternative care. 73% (72) of all the positive partners not on ARVs were initiated.

Of the remaining 347 partners who did not know their status at the time of contact, 284 were tested and 114 (40%) found positive. 108 (95%) of the newly diagnosed partners were initiated on ARVs and 163 (96%) of the negative partners offered prevention services.

Beyond the yield, FBIT can potentially break the chain of HIV transmission by improving ARV initiation rates, reaching and initiating clients lost in clinical care, and providing prevention services to discordant couples.

**Next steps:** FBIT is being scaled up beyond the pilot regions but this needs to be accelerated and implemented with evidence-based retention strategies for the country will achieve epidemic control.

**Keywords:** Diagnosis, linkage, prevention

## FRPEC117

### Family-based Index Client Testing Yield for Persons Living with HIV: A Review of Ghana's Experience Three Months Post-implementation

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**Issues:** Following the adoption of the UNAIDS "90 90 90" targets for 2020 towards the elimination of HIV by 2030, there has been the need for innovative approaches to achieve these targets. The first "90" requires that 90% of people living with HIV should know their status. Ghana at the end of 2018 was at 57% and efforts to accelerate progress led to the pilot of the Family-based Index client testing (FBIT) strategy. The strategy is said to improve efficacy in testing in other countries. This study reports its yield among listed partners and children of index clients.

**Description:** In December 2018, 40 purposively selected facilities across five regions in Ghana received training and were supported to initiate family-based index client HIV testing. After three months of implementation (January-March 2019), data was gathered and validated from all implementing sites. Each region had a minimum of 7 and maximum of 9 facilities included. The data was collected in April 2019, entered and analyzed using StatsDirect Version 3.

**Lessons learned:** From the 40 health facilities, a total of 1676 index clients were offered FBIT with an average acceptance rate of 78% across the regions.

A total of 787 partners were listed by index clients of which 463 (59%) were successfully contacted. 284 partners were tested of which 114 were seropositive giving a yield of 40%. 108 (95%) of these were successfully linked to ART care. A total of 1553 children were listed by index clients with 621 (40.0%) successfully contacted. In all, 519 (83.6%) were tested and 76 (14.6%) found seropositive. Seventy-one (93%) were successfully linked to ART care.

Though the use of Community Health Nurses and Models of Hope promoted FBIT, fear of disclosure on the part of index clients, refusal of the partners to report for testing, schooling schedules of listed children, children not living with the index clients and lack of community-level access to ART were barriers to testing and ARV initiation during the pilot.

FBIT has therefore been shown to have a high yield and linkage rates for positives across the five pilot regions in Ghana and thus an important strategy to help identify persons living with HIV.

**Next steps:** To accelerate the attainment of the 90-90-90 targets, Ghana has prioritized and is scaling up FBIT to all other regions. There is however the need to explore and develop context-specific solutions to its barriers.

**Keywords:** HIV testing, linkage, initiation rate

## FRPEC118

### **Increasing Pediatric HIV Testing in Low Prevalence Settings: A Qualitative Study of Children of PLHIV in Nigeria**

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**Background:** HIV prevalence among children in Nigeria is 0.2%. This equates to about 142,925 children living with HIV (CLHIV). Approximately 63.2% of the estimated 1,800,000 adult PLHIV in Nigeria are on treatment while only 49% of the estimated CLHIV are currently on treatment; an indication that while adults are moving closer to the UNAIDS 90-90-90 goals of achieving HIV epidemic control, children are being left behind. We conducted a qualitative study to better understand barriers and facilitators impacting uptake of HIV testing among children of PLHIV currently on treatment in Nigeria.

**Methods:** In November 2018, semi-structured interviews were conducted with PLHIV who had at least one biological child < 15 years of age at the time of the PLHIV's diagnosis and still living. Interviews were conducted in 24 facilities across six geographic regions. Participants were asked sociodemographic questions in addition to questions about their HIV status and care seeking behaviors, and factors influencing their decision to have or not have their children tested for HIV. Transcripts were analyzed manually by theme using the framework analysis and analytic induction methodologies for qualitative research.

**Results:** A total of 101 persons consented and participated in the interviews. Amongst participants, 83 reported their partners had a prior HIV test, while 93 reported their children had been tested for HIV. Testing facilitators for children of PLHIV included: ANC attendance and facility delivery, participation in PMTCT, family support, and demand creation for HTS through awareness creation and continuous education by health care workers. Barriers included: individual perception of children's health status, partner violence, religion and cultural beliefs, social stigma, discrimination, facility access, and user fees.

**Conclusions and Recommendations:** Demand creation for HTS via health promotion activities and continuous counselling and education from healthcare providers are necessary to improve HTS uptake of children of PLHIV. Structural barriers, such as user fees, should be removed to facilitate access to HTS. Expansion of index testing for biological children of PLHIV will increase the number of at-risk children tested. To reach epidemic control in Nigeria, knowledge of HIV status must be increased among children. Targeted testing of children of PLHIV can help in identifying CLHIV who were missed during PMTCT and increase pediatric case finding.

## **FRPEC119**

### **Self HIV Testing Versus Service Provider HIV Testing: An Evaluation of Student Preferences in 5 Tertiary Institutions in Manicaland Province of Zimbabwe**

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**Background:** Although commendable efforts have been made in Zimbabwe to make HIV testing readily available and accessible, 1 out of 4 people living with HIV still do not know that they have contracted the virus. Researchers have identified a number of reasons why people may choose not to get tested chief being fears around confidentiality. Self HIV testing has therefore emerged as a panacea to these issues and this study sought to establish student preferences for HIV testing between Self HIV testing and Service Provider HIV testing in 5 tertiary institutions in Manicaland Province of Zimbabwe. Apparently, Self HIV testing is still on a pilot stage and this study was done to assess the levels of readiness for tertiary institutions to roll out Self HIV testing.

**Methods:** A pre-tested semi-structured questionnaire was administered to 500 randomly selected students at 5 tertiary institutions in Manicaland Province of Zimbabwe (2 Teacher Training Colleges; 2 Universities; 1 Polytechnic and 1 Vocational Training Centre). The 500 students (250 male; 250 female) were asked to choose between self HIV testing and service provider HIV testing and to justify their choice.

**Results:** Out of the 500 students, 408 students (81, 6 %) preferred to test themselves for HIV using the Self-Test Kit whereas a total of 92 students (18,4 %) preferred to be tested for HIV by a trained service provider. Students who preferred self HIV testing identified breach of confidentiality, lack of a youth-friendly approach to students, and lack of professionalism by college nurses as key deterrents from accessing HIV testing services from the college clinics' providers. They preferred self HIV testing because of its perceived flexibility on knowing results, less time consumption, ease of access, ability to test partner before sex and increased privacy. Those who preferred the service provider HIV testing identified factors such as the need for professional counselling and immediate access to treatment and expert guidance on what to do next.

**Conclusions and Recommendations:** Student preferences for HIV testing methods are determined by their perceptions and knowledge levels about the testing method in question. Whilst there can be fears of suicidal tendencies among students after the administration of self-test kits, it might be high time tertiary institutions move towards self HIV testing to increase access to HIV testing for early treatment of students living with HIV.

## **FRPEC120**

### **Optimisation du Dépistage chez les Hommes de 25 Ans et Plus par l'Approche Multi Maladie**

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**Questions:** La Côte d'Ivoire s'est engagée depuis plusieurs décennies dans la lutte contre le sida. Avec une prévalence de 2,9% (CIPHIA 2018), elle fait partie des pays les plus touchés en Afrique de l'Ouest. L'épidémie du VIH/sida est généralisée dans la population et concentrée dans certains groupes spécifiques. L'épidémiologie a montré une faible utilisation des services de dépistage et des pratiques à risque chez les hommes de 25 ans et + qui constituent une des cibles prioritaires du PSN. Afin de contribuer à l'atteinte des 3 "90" et à réduire les nouvelles infections, un programme de prévention basé sur une approche multi-maladie a été développée pour optimiser le rendement de dépistage chez les hommes de 25 ans et +.

**Description:** Il s'agit de l'organisation de campagne de soin multimaladie ciblant les hommes de 25 ans et + se trouvant dans des leurs lieux de travail. Placée sous le lead du district sanitaire de la localité, qui se charge d'informer l'entreprise identifiée et de mettre à disposition des prestataires de santé, du matériel et des intrants pour le dépistage. Les communautaires associés à cette campagne, font la mobilisation, la sensibilisation et l'orientation des bénéficiaires vers les prestataires de santé pour la consultation médicale gratuite avec un focus mis sur le diagnostic du diabète, de l'HTA, du paludisme et de la tuberculose. A la fin de la consultation, le prestataire de santé aborde la question du VIH et oriente le bénéficiaire vers le poste de dépistage des communautaires qui ramèneront le bénéficiaire vers le prestataire pour l'enrôlement si positif. Pour une meilleure affluence, des spots sont diffusés pour informer de la tenue des campagnes.

**Leçons apprises:** En 06 mois, 109 campagnes ont été menées dans 08 districts sanitaires. 83% des 5741 personnes consultées ont été testées au VIH; 120 soit 2,5% ont été VIH+ et enrôlées dans les soins. Nous notons que cette approche peut contribuer à l'optimisation du dépistage surtout chez des cibles réfractaires. De plus, l'implication des autorités sanitaires, facilite l'accessibilité des entreprises. Aussi, l'approche intégrée nous paraît nécessaire et efficace dans la réponse aux différentes maladies surtout que nous observons une raréfaction des ressources.

#### **Prochaines étapes:**

- Insérer d'autres offre dans les prestations offertes;
- Etendre les campagnes à la cible des femmes;
- Renforcement de la communication autour du dépistage, de la PreP et du message U=U.

## FRPEC121

### Accuracy and Effectiveness of Unassisted versus Assisted Field Use of Capillary Blood-based Exacto® HIV Self-test in Democratic Republic of Congo

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**Background:** HIV self-testing (HIVST) may be use free or directly assisted by health care workers. The accuracy and effectiveness of unassisted HIVST (UH) are less established in Central Africa. This trial aimed to estimate the practicability, accuracy and effectiveness of UH versus directly assisted HIVST (DAH) in field settings in the Democratic Republic of the Congo (DRC).

**Methods:** A non-blinded, randomized controlled, non-inferiority trial of UH compared to DAH among high-risk population for HIV infection was conducted in Kisangani, DRC, using the CE-IVD marked capillary blood-based Exacto® Test HIV self-test (Biosynex, Strasbourg, France). Participants were randomized in a 1:1 ratio to UH or DAH. Wald asymptotic test with non-inferiority limit set at -10 was used for comparisons. Interventions were assessed on outcomes by the risk ratios (RR) obtained by Poisson regression.

**Results:** The rate of successful performance of HIV self-test was 93.2% in UH and 93.2% DAH. The rate of correct interpretation of the test results was 86.9% in UH arm and 93.2% in DAH yielding the absolute difference of -6.3% (95%CI: -10.8 to 2.5), non-inferiority not shown. A total of 25% of positive results were misinterpreted as negative in DAH group whereas 16.7% of positive results were misinterpreted as invalid in UH group giving Cohen's kappa coefficients at 0.69 *versus* 0.44 in DAH and UH, respectively. UH significantly decreased the rate of correct interpretation of results (RR: 0.60 [95%CI: 0.36 to 0.98]; P=0.019). HIVST sensitivity was 100% in the two study arms, while the specificity was 92.4% in UH arm and 98.7% in DAH arm, yielding a difference of -6.3% (95%CI: -12.7 to 2.6), non-inferiority not shown. The rate of linkage to care was lower in UH arm as compared to DAH arm (89.4% *versus* 100%; RR: 0.13 [95%CI: 0.03 to 0.51]; P=0.004). Finally, willingness to buy HIV self-test kit was higher in UH arm as compared to DAH arm (92.3% *versus* 74.1%; RR: 4.20 [95%CI: 2.42 to 7.32]; P< 0.001).

**Conclusions and Recommendations:** This study demonstrates in the cultural context of the DRC that both UH and DAH using a capillary blood-based HIV self-test show high practicability, accuracy and effectiveness for HIV testing. Although UH was non-inferior to DAH, improved counseling and training prior to UH could likely enhance the test accuracy and the linkage to care. Taken together, UH as well as DAH should improve access to HIV testing in DRC.

Trial registration ID: PACTR201904546865585.

## FRPEC122

### **Sociodemographic Characteristics of Adolescents Preferring Home-based HIV Testing Using Capillary Blood-based Exacto® HIV Self-test in Kisangani, Democratic Republic of the Congo**

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**Background:** HIV self-testing (HIVST) offers an alternative to facility-based voluntary counselling and testing (VCT) services, particularly for vulnerable populations such as adolescents. The study aimed to determine the sociodemographic factors associated with adolescents preferring home-based HIVST over facility-based VCT in Kisangani, Democratic Republic of the Congo (DRC).

**Methods:** A representative cross-sectional study was conducted among adolescents (aged 15 to 19 years) using a face-to-face, paper-based, semi-structured questionnaire, and logistic regression for statistical analysis.

**Results:** Among 597 adolescents who had completed the study questionnaire, 323 (54.1%) preferred home-based HIVST over facility-based VCT. In multivariate analysis, male gender, married or partnered civil status, and previous knowledge about HIV self-testing were associated with preference of home-based HIVST over facility-based VCT (adjusted OR: 1.5, 95% CI: 1.1-2.1; adjusted OR: 1.8, 95% CI: 1.1-3.1; adjusted OR: 4.2, 95% CI: 2.6-6.8, respectively).

**Conclusions and Recommendations:** The preference of home-based HIVST was slightly higher among adolescents in Kisangani. Male gender, married or partnered civil status, and previous knowledge about HIV self-testing were found to be factors associated with adolescents preferring home-based HIVST over facility-based VCT. These observations suggest the existence of a specific socio-demographic profile associated with the effective use of HIVST in adolescents living in sub-Saharan Africa.



## **FRPEC123**

### **Knowledge and Perception about HIV-self Testing among Female Sex Worker in Ondo State Following the Approval of Alere HIV Combo (AHC) Rapid Test KIT by the Ministry of Health in Nigeria**

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**Issues:** The result of the concluded Nigeria HIV/AIDS Indicator and Impact Survey (NAIIS), recorded the prevalence of HIV in Nigeria to be 1.4% among adults aged 15-49 years and an estimation of 1.9 million people are living with HIV in Nigeria. Female sex workers, men who have sex with men, people who inject drugs make up 3.4% of Nigeria's population but yet account for 32% of new HIV Infection, 14.4% of sex workers are living with HIV in Nigeria and this prevalence is much higher than the general population. Female sex workers are highly vulnerable to HIV due to their high- risk sexual behaviors, limited access to prevention, diagnosis and treatment services, high level of stigma associated with sex work. HIV self-testing was recommended by WHO as an additional approach to increase HIV testing services and this may increase the acceptability, access to confidential and no stigmatizing approach to HIV testing. The objective of this study is to test the knowledge and perception of female sex workers about HIV self-testing in Akure South, Ondo state in order to contribute towards achieving the 90-90-90 UNAIDS target.

**Descriptions:** The study was conducted among female sex workers at brothels where they meet with their clients at Akure South. Female sex workers were interviewed to determine knowledge and perception toward HIV self-testing. The sample size of 80 female sex workers between the ages of 15-47 years were recruited for the study between April to June 2019.

**Lessons learned:** The result of the study revealed that majority of female sex workers have had the knowledge of HIV self-testing (62.9%). Fifty-six percent (56.0%) reported willingness to use HIVST, majority 67.4% agreed that they would confirm their result at the healthcare facility. Perception about pre and post-test counselling were important and also willingness for clients to get tested before transaction were the factors that will contribute HIVST.

**Next steps:** HIV self -testing would increase HIV test uptake if key populations are able to test themselves, interpret their results avoiding false positive or false negative results and also be able to link to health care system for proper HIV prevention, treatment and care services. Pre and post counselling during HIV testing, availability of test kits in pharmacy stores, sensitization and awareness on how to properly interpret result are the issues and concerns that needs to be addressed to ensure the effectiveness of HIV self-testing in Nigeria.

## FRPEC124

### Adolescent HIV Case Finding in PEPFAR: HIV Testing Practices and Performance by Modality, October 2017-September 2018

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**Background:** Per recent population surveys, up to 50% of adolescents living with HIV (ALHIV) are unaware of their infection. We assessed HIV testing and identification of ALHIV by testing modality in US President's Emergency Plan for AIDS Relief (PEPFAR) programs.

**Methods:** We analyzed HIV testing data from 33 country/regional PEPFAR programs reporting on adolescents 10-19 years from October 2017-September 2018 by modality, age, and gender. Proportion of tests and positives, yield (# positives/# tests), and number needed to test (NNT) to find a positive (# tests/# positives) were calculated.

**Results:** Of over 14 million tests done, most were in outpatient department (OPD) (48.7%), followed by voluntary counseling and testing (VCT) (13.3%), voluntary medical male circumcision (VMMC) (13.0%), and antenatal care (ANC) (9.4%). Index testing (Index) comprised 4.7% of tests (2.7% in facility, 2.0% in community); other community-based testing strategies (CBT) comprised 7.9%. Low proportions of tests were in inpatient (2.0%), emergency ward (0.4%), and sexually transmitted infection clinics (0.1%). There were 182,332 positives; the majority were in OPD (45.6%), VCT (14.8%), and ANC (13.1%). Index comprised 9.4% of positives; and in males, comprised 11.8% of positives. CBT comprised 9.6% of positives; VMMC comprised 3.5%. Modalities had similar proportion of positives in 10-14 and 15-19 year-olds except Index (16.8% vs. 7.4%), ANC (1.4% vs. 16.2%), and VMMC (11.0% vs. 1.6%). Average yield was 1.3%, with NNT 79. Tuberculosis clinic was most efficient (yield 4.6%, NNT 22), albeit low-volume (60,379 tests). Index was also efficient (in facility: yield 2.2%, NNT 45; in community: yield 2.9%, NNT 35). VMMC was high volume (1,877,376 tests, 30.2% of tests in males), but least efficient (yield 0.3%, NNT 292). Among females, 16.5% of tests were in ANC, identifying 23,593 positives, comprising 18% of positives (yield 1.8%, NNT 58).

**Conclusions:** We found modality-specific adolescent case finding gaps and opportunities overall, and by age and gender. In low-yield high-volume settings, such as OPD and VMMC, risk screening and self-testing may be strategic to maximize resources. Higher proportion of positives from VMMC in 10-14 year-olds suggests potential missed opportunities in identification of perinatally-infected boys or in prevention pre-age of sexual debut. Efficiency was high in Index and in ANC; maximizing of testing coverage and acceptance in these settings is needed.

## FRPEC125

### Key Populations Preferred Partner Notification Approach for Disclosing HIV Status to Sexual and Injecting Drug Partners in Abuja, Nigeria

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**Background:** HIV partner notification approaches such as contract, dual, client/voluntary, and provider approach, are time-tested index client testing (ICT) strategies through which People Living With HIV/AIDS (PLWHA) are invited to voluntarily disclose their HIV status to their partners via any of the approaches. This study examined PLWHA Key Populations (KPs) preferred approach of partner notification in Abuja, Nigeria

**Methods:** We conducted a cross-sectional study in March 2019 using structured, self-administered questionnaires during program activities as part of quality improvement and used purposeful sampling to identify participants. Respondents were PLWHA KPs (female sex workers (FSW), men who have sex with men (MSM), people who inject drugs (PWID), and transgender men and women (TGM, TGW)) on treatment in Heartland Alliance International Nigeria supported facilities. We used the Statistical Package for Social Sciences (SPSS) version 23 for data analysis using chi-square at 95% confidence and alpha set at  $P \leq 0.05$ .

**Results:** A total of 214 KPs (114 females, 95 Males, 4 TGM, and 1 TGW) participated in the study. The mean [standard deviation] age was 31 [ $\pm 6.7$ ] years. The majority, 123 (57.5%) were FSW, 48 (22.4%) PWIDs, 38 (17.8%) MSM, and 5 (2.3%) TGM/TGW. Of the total, 115 (53.0%) respondents said they would prefer the voluntary/client ICT approach, 56 (26.2%) preferred the provider approach, 28 (13.1%) contract, and 15 (7%) the dual method. FSW (54.5%) preferred voluntary/client, 34 (27.6%) provider, 16 (13.0%) contract, and 6 (0.5%) dual. Similarly, MSM KP, 23 (60.5%) preferred client/voluntary, 6 (15.7%) provider, 5 (13.1%) contract, and 4 (10.5%) dual. PWID group, 22 (45.8%) client referral method, 15 (31.2%) provider, 7 (14.5%) contract, and 4 (8.3%) dual. For TG KP group, 3 (60%) client, 1 (40%) dual and provider, and none opted for contract approach. There was no statistical significant relationship between KP group and preferred option for notifying partners ( $X^2 = 6.674$ ,  $df = 9$  and  $P = 0.67$ )

**Conclusions and Recommendations:** The voluntary/client referral approach was the most preferred and the least preferred was the dual method. However, since provider referral methods have been shown to be more effective ICT strategy, it is important to develop messages to encourage beneficiaries to select provider assisted method in order to increase ICT effectiveness

**Keywords:** Key population, Partner notification approach

## FRPEC126

### Rapid Improvement in HIV Diagnostic Coverage through Scale-up of Community Based Index Testing in the FIKIA Project, Tanzania

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**Issues:** In Tanzania, 61% of people living with HIV (PLHIV) know their HIV status according to National Population-based HIV Impact Assessment data. To close this gap, targeted testing of high-risk individuals, such as contacts of HIV positive index cases, including sexual and needle sharing partners of PLHIV and biological children of HIV-positive mothers, is critical for epidemic control.

**Descriptions:** ICAP in Tanzania's FIKIA Project provides community-based HIV testing in nine regions of Tanzania, including targeted testing in hotspots such as bars and guesthouses, and in high-prevalence areas such as fishing and mining communities. FIKIA integrated index testing to reach contacts of individuals diagnosed HIV-positive through community testing. For all people testing HIV-positive, healthcare workers and trained PLHIV expert clients introduced partner notification and testing, and counselled clients to list all their sexual and needle sharing partners and biological children. These contacts were traced through voluntary partner notification or assisted disclosure services provided in the home or other location of clients' preference. Reached contacts were offered HIV testing. PLHIV clients not wishing to disclose their status to contacts gave information about when and where their contacts were likely to be found. Thereafter, FIKIA teams conducted "satellite" events offering screening and testing to all in the area, including contacts, without identification of the index client. Aggregate testing and diagnosis data from routinely-reported monitoring and evaluation indicators were reviewed.

**Lessons learned:** From October-December 2018 (Q1) to January-March 2019 (Q2), there was an increase in contacts reached and tested for HIV from 28,240 (with 7.4% yield) in Q1 to 48,264 (with 8.7% yield) in Q2. In contrast, yield from non-index testing was 2.5% (5,747/230,258) in Q1 and 2.4% (6,236/260,709) in Q2. Although index testing comprised only 11% (28,240/258,498) of all tests performed in Q1 and 16% (48,264/308,973) in Q2, the proportion of all newly diagnosed PLHIV who were index contacts increased from 27% (2,091/7,838) in Q1 to 40% (4,185/10,421) in Q2.

**Next steps:** Resources and methods for testing should focus on targeted approaches such as index testing to reach undiagnosed PLHIV. Community-based index testing tailored to individual client preferences for time, location, and disclosure is a feasible and promising way to identify undiagnosed PLHIV in Tanzania.

## FRPEC127

### **Uptake of HIV Self Testing among Men who Have Sex with Men who Have Never Tested for HIV: Attaining the UNAIDS 90:90:90**

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**Background:** Despite having the highest burden of HIV in Nigeria, only about a two-thirds of men who have sex with men (MSM) have ever tested for HIV. HIV self testing (HIVST) provides a viable approach in increasing access and uptake of HIV testing. We assessed the uptake of HIVST among MSM who had never tested for HIV.

**Methods:** Two HIVST kits were distributed to MSM via key opinion leaders in the community between May and September 2017 and MSM were followed for three months to assess uptake of HIVST.

Descriptive statistics and Chi square tests of comparison for differences between categorical variables were conducted. Logistic regression was used to assess correlates of HIVST.

**Results:** Of a total of 319 MSM enrolled into the study, majority were aged < 25 years (44%), 86% were single, 66% had secondary level education, 59% were employed and 25% (63) had never tested (NT) for HIV. There was no difference in age ( $p=0.07$ ), education ( $p=0.38$ ), engaging in transactional sex (0.49) and condom use ( $p=0.64$ ) between NT and those who had ever tested (ET). Use of HIVST was higher among those who had ET (98%) compared to NT (95%; $p=0.038$ ). Repeat HIV test (36% vs. 38%; $p=0.333$ ) and intention to use HIVST kit in the future (30% vs. 40%; $p=0.333$ ) was similar between ET and NT respectively. The use of the kit within one week of collection was similar between ET and NT (73% vs. 68%; $p=0.660$ ). When controlled for age, education, occupation and marital status, there was no difference in uptake of HIVST between those who had tested previously and those who had never tested (AOR:0.38; 95%CI:0.07 - 2.13).

**Conclusions and Recommendations:** Uptake of HIVST was very high among MSM, even among those who had never tested (95%). It also encouraged repeat testing among this high risk group. The similarities in use of the HIVST kit between those who had ever tested and those who had never, suggests that HIVST is an innovative intervention that can support the attainment of 90% coverage of HIV testing among this group in Nigeria. Further research is required to understand if these findings can be elicited from other sub-groups with poor access to HIV testing.

## FRPEC128

### Scale Up of Provider-assisted Index Client Testing among Key Populations and their High Risk Contacts

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**Background:** Key populations (KP) are vulnerable to HIV in Nigeria with prevalence of 22.9% among men who have sex with men (MSM), 19.4% among brothel based female sex workers (FSW), 8.6% among non-brothel based FSW and 3.4% among persons who inject drugs (PWID) compared to 1.9% among women and 0.9% among men in the general population. Index Client Testing (ICT) increases the effectiveness and efficacy of testing programs while respecting beneficiaries' rights to consent and confidentiality. The notification approaches include passive/client referral, provider-assisted, contracts, dual referral, and household referral. Active/assisted approaches such as providers themselves contacting the partners are the most effective in identifying new HIV-positive cases.

**Methods:** The Integrated Most At-Risk Populations HIV Intervention Prevention Program (IMHIPP) provided HIV testing services to KPs and their sexual and injecting partners using the ICT in Akwa Ibom, Cross River, Lagos and Rivers states in Nigeria, between October 2018 and May 2019. Quantitative data was collected using the program's adapted partner notification service index client intake forms and follow-up worksheet. We used the online tool <http://vassarstats.net> to perform chi-square "Goodness of Fit" test to determine if comparisons between groups were statistically significant at the P=0.05 level.

**Results:** : In total, 4,411 sexual and injecting partners of KPs were identified the index clients 79% (3,478) were notified through various approach. Of these, 64% (2,243) were notified through the provider-assisted approach, 29% (1,027) passive/client referral, 2% (59) household referral and 5% (158) contracts. Among the 4,411 index clients notified, 92% (4,058) were reached with HIV Testing Services with a positive yield of 46% (1,868). Partners notified through providers assisted (71%) had higher odds of receiving HIV testing testing than passive/clients referral (20%), household (2%) and contract approach (7%). (OR 2.754 CI: 2.097-2.761, ChiSq 153.66 P< 0.001).

**Conclusions and Recommendations:** In concordance with research in other contexts, the provider-assisted approach proved most effective to reach beneficiaries with HTS. However, community service providers must respect index patients' rights to choose if, when and how sexual and injecting partners elicited are notified and/or approached with HTS. Furthermore, data shows that encouraging active methods will lead to better outcomes.

## **FRPEC129**

### **Unmet Need for HIV Testing among Women and Children Outside of Traditional PMTCT Programmes**

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**Issue:** Mother to child transmission (MTCT) of HIV is the primary means of infection among infants and children in Malawi. While the national program for prevention of mother to child transmission (PMTCT) has significantly reduced MTCT, there are likely still women who test negative during ANC but are at risk of infection during the breastfeeding period. This represents a large cohort of women who are at elevated risk of infection and subsequent MTCT.

**Description:** A national taskforce of government and other stakeholders drafted screening tools to identify HIV-exposed children between the ages of 2-12 years at well-child and outpatient departments. The tool screened children based on their mother's testing history. If the mother had an HIV-negative test result from when the child was >2 years (i.e. after the end of breastfeeding), then neither the child nor the mother were referred for HIV testing services (HTS). If the mother had never been tested for HIV or their last negative test was when the child was < 2 years (i.e. while still breastfeeding), then the mother was referred for HTS. The child would then only be referred for HTS if the mother tested positive.

**Lessons learned:** In a small-scale operational pilot of the draft screening tool, 676 mothers with children aged 2-12 years were screened in 8 facilities in 2 weeks. Initial screening and test results suggest there is a significant need for screening women for HIV testing and retesting in the postnatal period. The majority of mothers (67%, 453/676) had a documented or reported HIV-negative result from when their child was 2 years or older and were not referred for HTS. 22% of mothers (152/676) had a documented or reported HIV-negative result from when the child was less than 2 years. All of these mothers were referred for and attended HTS. 7.9% of those mothers tested HIV-positive (12/152). A small proportion of all mothers screened reported never being tested for HIV (4%, 27/676). All of those women were referred for and attended HTS. 22.7% of these women tested HIV positive (5/27). Of all women who tested positive, 82% (14/17) then consented to HTS for their children. 21.4% (3/14) of their children tested HIV-positive.

**Next steps:** The national taskforce has since revised the screening tool and are now piloting the revised version in 30 health facilities. Data from the second pilot will inform national adoption and scale up.

## FRPEC130

### **HIV Self-testing among Men who Have Sex with Men (MSM) in South-East Nigeria: An Unmet Need**

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**Background:** The proposition of HIV self-testing (HIVST) came in the mid-1980s, HIVST is critical in reaching the UNAIDS' 90-90-90 goals. It offers an alternative to facility-based HIV testing services, especially for key populations such as men who have sex with men (MSM) who may fear accessing testing due to stigma, discrimination and criminalization in spite of the high burden of infection among them.

MSM are disproportionately affected by HIV in Nigeria as HIV prevalence among MSM increased from 17.2 percent in 2010 to 22.9 percent in 2014, whereas the prevalence of HIV among other key populations decreased.

This study therefore assessed the use of HIVST among MSM in order to identify the gap and provide necessary solution to reduce the prevalence of HIV among this population and ensure that those who are positive seek necessary help.

**Methods:** A cross sectional descriptive study conducted among 200 MSM in Enugu South-East, Nigeria, selected via respondent-driven sampling. Data collection was with the aid of a validated semi-structured, self-administered questionnaire. Data was analyzed using SPSS 23.0. Relevant descriptive statistics were calculated and presented as frequencies and percentages. Participation was fully voluntary, informed consent obtained and strict confidentiality was ensured

**Results:** Mean age of respondents is 30.90±7.37 years. Most of the respondents were Christians (92.0%); 88(44.0%) have secondary level of education; 146(73.0%) married and 68(34.0%) were self-employed. majority (72.0%) knew their HIV status, 64(32.0%) have heard about HIVST with majority through media. Only 4(2.0%) have seen HIV self-testing kit and just 2(1.0%) have used the HIV self-testing kit. All the respondents felt that HIVST will help increase the number of MSM knowing their HIV status, 194(97.0%) will be willing to use HIV self-testing kit if available and 64(32.0%) said HIV self-testing kits are available.

**Conclusions and Recommendations:** Awareness of HIVST among MSM is very low even though majority of them know their HIV status. The result also showed low availability of HIV self-testing kit and extremely low use of HIVST kit among MSM hence there is a big gap and unmet need in availability and use of HIVST among MSM. Increased awareness and provision of kits for HIVST among key population will help increase the knowledge of their status hence there is a need for education and provision of HIVST kit for key population like MSM.

**Keywords:** MSM, HIVST, Enugu



## FRPEC131

### **Sexual Practice and Knowledge of HIV Self-testing among Edo Youths, South-South Nigeria**

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**Background:** The UNAIDS targeting 90% of people living with HIV (PLWHIV) knowing their status could be daunting in Sub-Sahara Africa owing to high social discrimination against PLWHIV. However, HIV self-testing (HIVST) potentially offers more privacy and confidentiality over other testing methods. The South-South zone of Nigeria according to 2019 Nigeria Aids Indicator and Impact Survey was reported to have the highest HIV prevalence of 3.1% among adults aged 15 - 49 years as against the national prevalence of 1.4% with Edo state having a prevalence of 1.9% which is terribly high when compared to some other Nigerian states. Sexual experimentation and unplanned sex associated with youths makes them even more vulnerable to HIV new infection. Therefore, it is imperative to determine sexual practice and HIVST among Edo youths, South-South Nigeria.

**Method:** A cross sectional descriptive study design was utilized in determining sexual practice and HIVST with other demographics among 600 Edo youth. using a purposive random sampling method. Data collection was with a validated semi-structured, self-administered questionnaire and analyzed using SPSS 23.0. Knowledge was graded as good, fair and poor while practice was graded as good and bad practice. Level of significant was set at  $p < 0.05$ . Participation was fully voluntary with signed written informed consent.

**Results:** Mean age of respondents was  $22.93 \pm 3.70$  years. There were 59.7% female and 40.3% male respondents. Most respondents (81.8%) are sexually active, with 69.0% having a current sexual partner with first sexual debut at mean age of  $14.30 \pm 8.00$  years and  $1.24 \pm 1.46$  mean number of sexual partners. Majority have bad sexual practice. Total of 35.5% respondents have heard of HIVST and 12.0% of them got the information from health workers. Only 46.6% had good, 37.6% fair while 15.8% has poor knowledge of HIVST. Knowledge was significantly associated with gender, religion, educational status and occupation of respondents ( $p < 0.05$ ) whereas there was no significant association between knowledge and sexual practice.

**Conclusion/ Recommendations:** Safe sexual practice of youth from this study is poor and HIVST is largely yet unknown to Edo youths as majority were not aware of it. Therefore, deliberate and speedy efforts in increasing consciousness of youths on HIVST must be made coupled with policy formulation to promote HIVST.

**Keywords:** HIVST, Youth, Sexual Practice

## FRPEC132

### **Activités Festives: Stratégie Innovante de Dépistage des Hommes Ayant des Rapports Sexuels avec des Hommes (HSH) dans le Cadre de l'Index Testing**

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**Questions:** Avec une prévalence de 2.7% du VIH/sida dans la population générale, 19.6% chez les hommes ayant les rapports sexuels avec les hommes (HSH), et de 13.0% chez les travailleuses de sexe (TS), la Côte d'Ivoire présente une pandémie affectant plus les populations clés. Dans le cadre de la réalisation des objectifs 90-90-90, l'une des priorités du Programme National de Lutte contre le Sida (PNLS) est l'atteinte du premier 90% (90% des personnes vivantes avec le VIH connaissent leur statut sérologique). L'ONG Espace Confiance dans le souci de mieux assurer la prise en charge des populations clés a mis en place des stratégies. L'une de ces approches est l'index testing qui consiste à dépister les partenaires sexuels des HSH dépistés positifs au VIH.

**Description:** Devant l'intérêt manifeste des HSH pour les activités de retrouvailles, des activités festives ont été organisées. Il est demandé aux HSH enrôlés dans les soins et les séronégatifs au VIH d'inviter leurs partenaires sexuels et amis. Pour préparer cette activité, plusieurs actions sont menées en amont:

(i) la sensibilisation lors des groupes de soutien (GS) des sujets index sur

« Importance du dépistage des partenaires sexuels » et briefer sur le déroulement de l'activité. (ii)

l'organisation de réunions avec les éducateurs de pairs (EP) HSH pour le choix de la date, du site, du lieu de rassemblement et de l'heure de l'activité. Ils sont chargés de sensibiliser leurs pairs dans la communauté et à travers les réseaux sociaux.

(iii) les relances téléphoniques aux participants pour le rappel de l'activité.

Le déroulement de l'activité festive comprend la sensibilisation sur « les IST et le VIH/sida » suivi du dépistage, le partage de repas et l'accompagnement des positifs à la Clinique de confiance pour leur prise en charge.

**Leçons apprises:** Les activités festives bien préparées et organisées permettent d'identifier des positifs avec de bon rendement. En effet, au cours de l'activité festive qui a recensé 42 sujets exposés, tous dépistés, 12 cas positifs ont été appréhendés soit un rendement de 29%.

**Prochaines étapes:** L'organisation des activités festives est une stratégie prometteuse à mettre à échelle dans le cadre des activités à haut rendement pour toucher les HSH les plus à risque. L'ONG Espace Confiance devra renforcer et poursuivre cette approche pour l'atteinte du premier 90.

Mots clés : VIH, index testing, HSH, activité festive, Côte d'Ivoire

## FRPEC133

### **Towards HIV Epidemic Control, Identifying Remaining PLHIV by Increasing Focused Testing Using Continuous Quality Improvement Small Test of Change (STOC) Model**

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**Issues:** As Rwanda approaches achieving HIV epidemic control, challenge remains in identifying the remaining HIV positive individuals. Index testing is a method of HIV testing whereby index-contacts are encouraged to receive HIV testing services. Index testing has higher yields than other testing modalities and enables outreach to individuals unlikely to seek HIV testing services

**Descriptions:** To improve uptake and yields in index testing, starting January 2019, 5 Kigali Health Facilities (HFs) implementing index-testing services were selected for CQI. Site visits to identify challenges hindering service uptake and assess capacity to implement CQI was conducted. HFs had to have functional Quality Improvement (QI) committee to implement STOC. We recommended reconstitution of QI committee to include the director of HF, ART clinic supervisor, ART nurses, VCT, PMTCT and ANC focal persons, social worker, data manager and District nurse mentor. Committees received QI training focused on index testing, support to data analytics and root cause analysis using Fishbone technique. After initial training and consultation, HFQI committee developed QI STOC projects to respond to identified gaps across the index testing cascades: 1) PLHIV offered index services, 2) Index cases accepted index-testing service, 3) Index-case partners contacted and tested for HIV. Follow-up visits were conducted one-week after STOC implementation. HFs revised index testing core components, work plans and adjusted targets. Mentorship and support continued through phone calls

**Lessons learned:** After a month of STOC implementation, all HFs showed significant improvement in index-reporting cascade; index acceptance rate increased from 21.7% to 48.2%, partner to index ratio increased from 1.7 to 1.9 and HIV testing yield increased from 2.1% to 6.3%. Intensive site-level monitoring and mentorship combined with CQI leads to increased index testing performance. Coupled with participation of other HIV care staff and directors of HFs, this approach improves site ability to identify and mitigate challenges in service delivery and program management. Although this approach is labor intensive, results indicate it may be extremely effective to scaling index testing nationally as the primary testing methodology in achieving and sustaining HIV epidemic control

**Next steps:** Scale-up CQI STOC model to remaining HFs, provide CQI mentorships and trainings, hold data reviews meetings and peer learning experience sharing

## **FRPEC134**

### **Quality vs Quantity - A National Assessment of HIV Testing Services (HTS) in South Africa Focus on: Testing 2019**

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An assessment of HIV Testing Services (HTS) was carried out in South African provinces of Mpumalanga, Limpopo, Free State, Kwa Zulu Natal & North West & analysed quality of HTS provision at 47 sites supported by Principal Recipients of the Global Fund to Fight AIDS, TB & Malaria. This section of the assessment sought to provide an overview on the existence of Standard Operating Procedures and job aides relating to rapid HIV testing procedures, test kit shortages, HTS client identification, the recording of client identifiers on test devices, the existence, functionality and use of timers, existence and visibility of job aides for client sample collection, the existence and correct use of sample collection devices such as capillary tubes, pipettes, swabs etc and finally an assessment of the competence of the tester to execute the HIV rapid testing procedure on the assessor.

**Method:** The assessment tool used existing tools & was guided by the National Guidelines on HTS 2016 & comprised of 56 main questions divided into eight sections, one of which was the assessment of training & certification. Sites were selected based on location & module focus. Sites were given advance notice of the assessment & provided with a condensed version of the tool. The consultant focused on the existing testers at the site, with priority being given to lay counsellors conducting HIV testing & in some instances registered nurses who were on site & to a large extent provided oversight & monitoring support.

#### **Results:**

1. Several sites had SOP's and job aides on site, many testers did not know the difference.
2. There was a lack of understanding of the purpose and use of SOP's and job aides across the board.
3. Mobile sites face the biggest challenges in having job aides displayed due to the nature of the tent/gazebo structure.
4. 51 percent of sites did not record client identifiers on the test devices which is not in line with national guidelines.
5. 34% Were found to inadequately follow the testing procedure.
6. Timer use ranged from no timers at the site and the use of a cell phone or wrist watch was employed to no use of the existing timer at all.
7. Use of personal protective equipment ranged from the use of gloves, apron and face mask to the use of no gloves or apron or face mask throughout the testing process.

**Recommendations:** Principal Recipients must take urgent action to strengthen the frequency, quality and independent oversight of the finger pricking process.

## FRPEC135

### Roche CAP/CTM HIV-1 Qualitative Test Version 2.0 Performance on Dried Blood Spots for Early Infant Diagnosis

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**Background:** In the context of early infant diagnosis (EID) decentralization in sub-Saharan Africa, dried blood spot (DBS) is now widely used for HIV proviral DNA detection in resource-limited settings. A new version of CAP/CTM (version 2) has been introduced, recently by Roche Diagnosis as a new real-time PCR assay to replace previous technologies on qualitative detection of HIV-1 DNA using whole blood and DBS samples. The objective of this study was to evaluate CAP/CTM version 2 compared to CAP/CTM version 1 and Amplicor on DBS.

**Methods:** A total of 261 DBS were collected from children born from HIV-seropositive mothers with a median age of 16 weeks (range 4 weeks to 17 months) and a sex ratio of 0.98 (129 males/132 females). Fresh DBS samples were stored with desiccants and humidity indicators before their transfer to the Bacteriology-Virology laboratory of CHU Aristide Le Dantec where they were kept at room temperature (22 to 25°C) until testing. All samples have been tested for detection of HIV-1 DNA using CAP/CTM version 2, performed from whole blood or DBS and double-targeted regions of *gag* gene and LTR, in comparison to CAP/CTM version 1 and Amplicor.

**Results:** CAP/CTM version 2 showed 100% of agreement with Amplicor including 74 positive results and 187 negative results. CAP/CTM version 2 versus CAP/CTM version 1 as well as CAP/CTM version 1 versus Amplicor showed two discordant results giving a sensitivity of 98.6%, specificity of 99.5%, positive predictive value of 98.6% and negative predictive value of 99.5%. The concordance was 99.12% (95% of confidence interval) giving a Kappa coefficient of 0.97 ( $p < 0.001$ ).

**Conclusions and Recommendations:** These findings confirmed the expected good performance of CAP/CTM version 2 for HIV-1 EID, highlighting the importance of EID in the prevention of mother-to-child transmission (PMTCT), care and treatment in children.

**Keywords:** HIV-1 Early infant diagnosis CAP/CTM v 2.0 DBS

## **FRPEC136**

### **Dispositifs de Relation d'Aide à Distance et Promotion de l'Auto-dépistage du VIH : Expérience de la Ligne INFO SIDA 106**

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**Contexte:** Dans le cadre du projet Breakthrough Action (BTA) ayant pour but la contribution de l'amélioration du premier 90 de la stratégie 90-90-90 de l'ONUSIDA, le Centre des Programmes de Communication (CCP) Johns Hopkins est chargé de conduire un pilote qui permettra d'identifier les meilleures conditions de la promotion et de la distribution des auto-dépistages. Dans la première phase, la Ligne INFO SIDA 106, hébergée par l'ONG RUBAN ROUGE CI, a été identifiée comme partenaire de mise en œuvre pour faire la promotion de l'auto-dépistage VIH et fournir une assistance technique pour son acquisition et son utilisation.

**Description:** La phase du projet exécuté, en collaboration avec la Ligne INFO SIDA 106, a démarré en septembre 2018 et a pris fin en mai 2019. Avant le démarrage, les écoutants ont reçu une formation sur l'éthique et la déontologie, les généralités sur l'auto-dépistage, la lecture et l'exploitation des supports de réalisation de l'auto-dépistage. En outre, ils ont été formés à apporter une assistance technique aux appelants pour réaliser leur auto-dépistage, interpréter les résultats et orienter vers les services adaptés.

**Leçons apprises:** sur les 7636 appels reçus, 83% provenaient des hommes dont 70% sont âgés de 15 à 25 ans. Cela donne de croire que jeunes hommes ont manifesté un intérêt prononcé pour l'auto-dépistage. Par ailleurs, il a été donné de constater que les appelants de plus de 25 ans appelaient plus pour les questionnements sur les conditions d'utilisation de l'auto-dépistage. Dans l'ensemble, les informations d'ordre général sur les avantages, la fiabilité, le temps de lecture et les conditions d'utilisation ont été les principales demandes des appelants. Les interventions ont permis d'informer sur l'existence et la possibilité de réaliser soi-même son test de dépistage.

**Prochaines étapes:** La Ligne INFO SIDA 106 a été identifiée par SOLTHIS dans le cadre du projet ATLAS en Côte d'Ivoire pour accompagner les usagers et usagères de l'auto-dépistage du VIH.

## **FRPEC137**

### **Assisted Partner Notification among Private Facilities in Kenya**

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**Issues:** HIV testing and knowledge of serostatus is critical in HIV control and increasing uptake of HIV services. However, despite increased awareness of HIV and improved availability of testing services and antiretroviral therapy, over 50% of Kenyans do not know their HIV status. Assisted partner notification is a public health strategy that provides HIV testing to individuals with sexual exposure to HIV and are at risk of infection from an index client. It can be an effective strategy to identify patients and to increase the testing yield, also leading to more efficient and targeted use of resources, including test kits.

**Descriptions:** The HCM program rolled out Assisted Partner Notification among 12 sites offering HIV care and treatment services in the private sector between April and June 2019.

PNS implementation: 134 clients were screened and 41 contacts were elicited. 3 contacts were known positives and therefore 38 contacts were eligible for testing (71%). 27 were tested (71% acceptance rate), of which ten were positive (37% positivity yield) and were linked to care. Acceptance of PNS was a challenge in the private facilities as most clients came to the private facilities seeking anonymity and privacy. The elicitation ratio was low.

However, where there was acceptance of PNS, the yield was high at 37%, compared to the average yield within the program of 1.8%.

**Lessons learned:** aPNS is an effective strategy to increase testing and identification of HIV positives in order to link them to care. For patients accessing care in the private sector, more counselling may be required to increase the number of patients who consent to providing partner details and also to increase the acceptance of testing among the contacts elicited.

**Next steps:** Train providers on PNS with a focus on counselling to increase elicitation rate by index clients. Scale up PNS within the other sites.

## FRPEC138

### Provider Assisted Self-testing Is Feasibility and Acceptable among Men who Have Sex with Men in Ghana

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**Issues:** HIV self-testing (HIVST) is known to be a discreet and convenient approach to HIV testing services and linkage to treatment. Anecdotal evidence from Maritime Life Precious Foundation's (MLPF), a civil society organization (CSO) working in with MSM in the western region of Ghana, indicated that some of their MSM clients were refusing HIV testing because of fears of breach of confidentiality and stigma. Although Ghana has not yet fully rolled out HIV self-testing, MLPF, under the USAID/Ghana Strengthening the Care Continuum Project, introduced the provider assisted HIV self-testing, using the Ghana health Service approved Oral quick to reach out to these MSM to test and link them to treatment.

**Descriptions:** During the implementation of this strategy (October 2017 and May 2019), MLPF reached 67 MSM who would only accept HIV testing if they could do the test themselves. Not wanting to lose potential HIV positive MSM, MLPF agreed to guide and support the 53 out of the 67 MSM who were willing to test, read, and interpret their own result and disclose to the counselor. The HIV counsellors and case manager were involved in the process by providing each of them with pre-test and post-test counselling. The 53 MSM were then guided to do the HIV test on their own, interpreted the results and willingly disclosed their results to the counsellors. After further engagement with clients for testing, 79 percent were willing to disclose test result for further support from the case managers and health care workers.

**Lessons learned:** The provider assisted Self-testing strategy was successful in testing all the 53 MSM clients who had opted for self-testing and willing to disclose result. This strategy resulted in a high HIV positivity yield (23 out of 53 clients tested positive). Currently, 19 out of 23 (83%) are on ART with 7 virally suppressed. The results indicate that the process of actively involving the client through coaching to self-test, gave them the confidence to accept their status and initiate treatment. Provider assisted Self-testing is feasible and acceptable to MSMs in Ghana

#### Next steps:

- For the undetectable equal untransmissible (U=U) to be a meaningful slogan in Ghana, the Government should consider rolling out self-testing.
- The results of this intervention will be shared with policy makers in Ghana, to help facilitate the introduction of HIVST.



## FRPEC139

### **Uptake of HIV Self Testing among Adolescents and Young People who Have Never Tested for HIV**

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**Background:** Various strategies have been employed to reach Adolescents and Young People (AYP) with HIV testing in Nigeria. Proportion of AYP who have ever tested and received their result is less than 20% (females 12%; males-10%). We assessed the uptake of HIVST among AYP who had never tested for HIV.

**Methods:** HIVST kits were distributed to AYP through youth focused community-based organizations in four states between September and November 2018 and AYP were followed for one month to assess uptake of HIVST. Descriptive statistics and Chi square tests of comparison for differences between categorical variables were conducted. Logistic regression was used to assess correlates of HIVST.

**Results:** Of a total of 1,011 AYP enrolled into the study, 53% were males and majority of respondents had completed at least secondary level education (70%). The median age was 19 yrs (IQR:19-22) and 67% (651) had never tested for HIV (NT). Use of HIVST was higher among those who had ever tested (ET) compared to those who had NT (100% vs. 98%;  $p=0.02$ ). The use of HIVST within a week of receiving it was similar (95%) for both ET and NT, while intention to use HIVST kit in the future (99% vs. 100%;  $p=0.309$ ) was slightly higher among NT. Among NT, use of HIVST was similar for males (99%) and females (98%;  $p=0.530$ ) and there was no difference by educational level ( $p=0.553$ ). Logistic regression showed that for AYP who had NT, age ( $p=0.607$ ), sex ( $p=0.345$ ), education ( $p=0.991$ ) and religion ( $p=0.760$ ) were not independently associated with use of HIVST.

**Conclusions and Recommendations:** The use of HIVST among AYP who had never tested for HIV is very high and is not associated with socio-demographics. The use of HIVST within a week of receiving it and their intention to use HIVST in the future suggests that it breaks all known barriers of poor uptake of HIV among AYP and will facilitate retesting among them. HIVST should thus be scaled up in Nigeria to significantly increase the proportion of AYP that know their status.

**Keywords:** HIVST, Adolescents and young people, 90:90:90

## FRPEC140

### Navigating the Social Harm Concerns of Duty Bearers in Making Oral HIV Self-testing Accessible to Key Population in Ghana

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**Background:** The pursuance of an AIDS-free Africa requires multifaceted and innovative approaches to ensure universal HIV service coverage. HIV self-testing (HIVST) empowers the population to access discreet and convenient HIV testing and eliminate disparities in access. However, there are potential social harms associated with HIVST just as with other HIV testing modalities. We present the possible social harm and ethical concerns in making HIVST available in Ghana for key populations (KPs) and pathways to navigate them.

**Methods:** The USAID Strengthening the Care Continuum Project, led by JSI Research & Training, conducted a feasibility and acceptability study of oral HIVST among KPs in Ghana from September to November 2017. Focus group discussions (FGDs) and in-depth interviews (IDIs) were conducted with FSWs and MSM, case managers/peer educators and cadre of health professionals, and national and regional level policymakers from two regions in Ghana (Greater Accra and Brong-Ahafo). A total of 24 FGDs (8 with case managers/peer educators, 8 with FSWs, and 8 with MSM) and 76 IDIs (20 national and regional policy makers, 16 healthcare providers, 16 KP organizations, 16 FSWs and 8 MSM) were conducted. FSWs and MSM were of HIV negative or unknown status and recruited by outreach workers. Interviews were transcribed verbatim and coded using inductive and deductive coding approaches and analysed with thematic content analysis technique.

**Results:** The social concerns expressed by participants in both the FGDs and IDIs (including policymakers) are in two themes:

- 1) human-rights and ethical concerns at the individual and interpersonal levels and
- 2) Social harm at the societal level.

The use of coercive force such as, at knife-point to test partner or others family members and children, drugging partners to fall asleep and test them without their knowledge or consent were the main human-right and ethical concerns participants raised about HIVST. For FSWs the concern was about clients using coercive force to test them before sex. The major societal level harm issues were the fear of use of HIVST to force couples to test before marriage or possible rise in divorce and suicide rates.

**Conclusions and Recommendations:** Policy makers should plan to deal with these perceived social harm issues through effective social behavioural change communication. Authors argues that effective community monitoring must be central to distribution and scale-up of HIVST to optimize its benefits.

## **FRPEC141**

### **The Evaluation of External Quality Assessment Program for HIV Rapid Test in the Voluntary Confidential Counseling and HIV Testing Centers in Cambodia: Data from 2013-2017**

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**Background:** External Quality Assessment (EQA) is one of the laboratory quality indicators used to evaluate laboratory testing performance in addition to internal quality control of the quality management system in the laboratory. In Cambodia, EQA program of HIV 1/2 rapid test in Voluntary Confidential Counseling and HIV Testing (VCCT) has been implemented since 2005 organized by the National Public Health Laboratory (NPHL). However, there were many VCCT sites remained have low EQA results. The objective of this study is to identify any potential pitfalls caused failure EQA result among the VCCT sites participated in HIV EQA program from 2013-2017

**Methods:** Quantitative study was conducted to identify the trend of EQA results among VCCT sites participated HIV EQA program with NPHL from 2013 to 2017. In addition, qualitative study was conducted to determine any potential pitfall caused failure EQA result based on report from on-site corrective action for those VCCT sites that have incorrect EQA results. Every year, personnel from VCCT sites were invited to join the refresher training workshop on how to perform those HIV rapid test follow nation algorithm. However, it has not been conducted since 2016.

**Results:** The overall percentage of VCCT sites that has EQA result  $\geq 80\%$  (Minimum 73% to Maximum 98%) from 2013-2017. It remained consistent results in 2013, 2014, 2015, and 2016 (98%, 95%, 97% and 97% respectively). However, the trend started declining for both first and second round in 2017 (83% and 73% respectively). The performance was not well maintained since there was no continuing education. By analyzing the on-site corrective action report getting from all VCCT sites that had incorrect result, the problem occurred mostly in pre-examination and post examination phase such as switching specimen code number and no crosscheck system in the laboratory

**Conclusions and Recommendations:** There was a remarkable declination of performance of HIV EQA result among VCCT sites in 2017 due to no continuing education. Errors were mostly occurred in pre and post examination due to switching specimen code number and no crosscheck system in laboratory.

**Keywords:** External Quality Assessment (EQA), Voluntary Confidential Counseling and HIV Testing (VCCT).

## FRPEC142

### Theory of Planned Behavior and HIV Counseling and Testing among Adolescents in Cameroon

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**Background:** Early HIV testing is necessary for the achievement of the 90-90-90 target. It is therefore important to identify factors associated with test undergoing, in order to define reliable strategies aiming to improve HIV testing, especially among vulnerable groups like adolescents, who are in high risk of contracting HIV infection.

**Methods:** 939 adolescents aged between 18 and 24 years old were interviewed using a questionnaire to collect information including socio-demographic variables as well as the constructs of the TPB (attitude, subjective norm and perceived control towards HCT), and previous HCT defined as independent variables. The correlations between TPB variables and the dependent variable (intention to use HCT services) were assessed using Spearman correlation and multiple regression models. Logistic regression was used to identify the independent association of social cognitive predictors of HCT among adolescents.

**Results:** A total of 939 students (median age 18 [IQR], 63.58% girls) participated in this study. More than half (66.98%) of the respondents had never had HCT. Of the social cognitive constructs, the strongest predictor of HCT uptake was perceived behavioral control ( $\beta = 0.24719$   $P = 1.12e-14$ ), followed by previous HCT which negatively influenced HCT intention ( $\beta = -0.27590$ ,  $P = 0.036$ ). Attitudes ( $\beta = 0.13685$ ,  $P < 0,000$ ) and subjective norm ( $\beta = 0.03409$ ,  $P = 0.016$ ) were weakly to HCT intention. Moreover, the intention to get tested was not influenced by age, gender and school level.

**Conclusions and Recommendations:** Public health interventions targeting adolescents should be designed to empower them to overcome barriers to the use of HCT services and enhance their perceived behavioral control towards HCT.

## FRPEC143

### Improving Testing of Contacts for HIV-positive Clients through Use of Community Lay Cadres in Eswatini

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**Issues:** Testing of contacts of index cases is reported to be an effective strategy to increase knowledge of HIV status. However, while case-finding for contacts of index cases is in place in EGPAF-supported facilities, soliciting contacts to come in for testing is challenging. This initiative assessed the impact of community cadres in increasing HIV testing rate among contacts of index cases.

**Descriptions:** In March 2018, two facilities recruited 30 community cadres (15/facility) from their catchment areas with assistance from community leaders. Community health workers were trained on home-based HIV testing services, index testing, door-to-door follow-up, and referral of contacts of index clients. From April to June 2018, the facilities provided community workers with a list of contacts to be tracked who had not yet visited the health facility for testing. Contacts traced were provided with education on HIV testing, encouraged to test, and issued a referral form to the facility for easy linkage to treatment. Community cadres shared progress at weekly meetings with the facility HTS counsellor, where new contacts were assigned; a register was used to record information and track outcomes. Pre- (January to March 2018) and post-intervention (April to June 2018) data from these two facilities were compared.

**Lessons learned:** In the pre-intervention period, 60 index cases and 116 contacts were identified; 45% of contacts were tested for HIV, with 5 testing positive (yield of 9.6%). In the post-intervention period, 118 index cases and 221 contacts were identified; 71% of contacts were tested for HIV, with 3 testing positive (yield of 2%). The increase in contacts tested from 45% to 71% was statistically significant. Using community cadres to provide home-based testing and counselling to index case contacts increased the percentage of contacts tested. Existing community health workers can easily be trained to bolster index case finding in communities where contact testing rates are low.

**Next steps:** EGPAF plans to scale up this initiative to all supported facilities using existing community health care workers such as community mentor mothers, TB active case finders, and community rural health motivators. EGPAF will advocate for MOH to include index contact tracing in the scope of work of all existing community health care workers. A cost-effectiveness study on follow-up of contacts in the community should be conducted to determine the efficiency of this initiative.

## **FRPEC144**

### **HIV Self-testing: Assessing Potential to Improve Efficiency of Community-Based Index Case Testing in Mwenezi District, Zimbabwe**

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In Zimbabwe, of the 1.4 million PLHIV, 74.2% know their status, of those 86.8% are on ART, and 86.5% of those, virally suppressed. Innovative strategies must therefore be employed to overcome the testing "leak" along the national treatment cascade to achieve the UNAIDS 90-90-90 targets. HIV self-testing (HIV-ST) has been recommended by the WHO as useful in increasing uptake of HIV testing services, however, evidence of this intervention's ability to improve identification of PLHIV within the Zimbabwean context was required to inform operational guidance.

HIV-ST was introduced in Mwenezi in June 2018, primarily to complement index case testing. Within the context of index case testing, HIV-ST is provided at household level to the contacts of index cases. Community-based cadres distribute the HIV-ST kits, and where requested, provide direct assistance to the client. In accordance to national guidance, nurse testers then provide confirmatory HIV testing to contacts with reactive HIV-ST results. This limits testing efforts by nurse testers to clients with a reactive self-test, and therefore most at risk of HIV infection. We performed a secondary retrospective comparative analysis to assess whether HIV testing volumes and yields in a district (Mwenezi) that introduced HIV-ST differed from surrounding districts in the same province where HIV-ST was not being implemented. We collected programme data that spanned six months before and after introduction of HIV-ST in Mwenezi (December 2017 to November 2018), and conducted a pre-and post-comparison of testing volumes and yields using paired t-tests.

Following the introduction of HIV-ST, Mwenezi showed an upward trend in yield, while the districts within the same province where HIV-ST had not been introduced had no statistically significant variations. There was a 43% reduction in testing volumes from 1427 to 816 between the baseline and implementation periods in Mwenezi, yet a 39% increase in the mean testing yield from 35% to 48% ( $p=0.03$ ). Therefore, In addition to expanding access to HIV testing services, these results suggest that HIV-ST provides potential for improving efficiencies within community-based index testing by identifying more PLHIV with fewer total tests. This reduces the workload of nurse testers and concentrates their efforts on clients with a reactive self-test, and therefore most at risk of HIV infection.

The project will scale up this strategy to all 8 implementing districts.

## **FRPEC145**

### **Enhancing the Rate of HIV Testing through Mobile HCT in Non-formal Sectors in Abuja, Nigeria**

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**Issues:** Worldwide, Nigeria has the second highest number of new infections reported each year, and an estimated 3.4% (3,426,600 million) of the population are living with HIV and the Nation's capital, FCT Abuja ranking fifth with 7.5%. In line with the President's Comprehensive Response Plan to provide testing and linkages for 80million Nigerians to know their HIV status and access HIV prevention care and treatment services. MHCT for targeted populations remains the bedrock of any national response, as it serves as the entry point into the continuum of HIV/AIDS prevention, care and treatment services. It creates an opportunity for a comprehensive individual risk assessment and accurate referrals to more intensive services.

**Descriptions:** The mobile HCT was conducted in 6 major markets in FCT Abuja. A one day refresher training to intimate counselor testers/peer educators on the action plan and team formation was conducted. A meeting with concerned stakeholders (ILO, National Agency for Control of AIDS (NACA), Society for Family Health (SFH) and Health Personnel from treatment facilities for referral purposes) was held. Community entry activities such as a pre-sensitization meeting with stakeholders from the various markets was conducted to gain consent and to ensure smooth run of the intervention. Supervisors were engaged to ensure accountability, supply/utilization of deliverables. Alere Determine HIV-1/2 test kits, Trinity Biotech Uni-Gold HIV kit and the Chembio HIV1/2 STAT-PAK were used for the testing and confirmation of clients' HIV status as contained in the National Algorithm with a Client Intake Form (CIF) used as a guide to conduct effective Knowledge Assessment.

**Lessons learned:** The intervention recorded a mass turnout of people who went through the three stages of testing. Referrals were made for the clients from the list of facilities we collaborated with. Commodities were distributed to clients and this served as another tool for increased demand for HCT.

**Next steps:** There should be an increase of regular visits of MHCT for target population to increase awareness, access and testing and reduce procrastination among individuals.

## **FRPEC146**

### **Accompagnement des Hommes qui Ont des Rapports Sexuels avec des Hommes par leur Pair pour le Dépistage du VIH dans la Ville de N'Zerekoré (Guinée)**

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**Contexte:** La prévalence du VIH en Guinée est de 1.7% et atteint 11,4% chez les Hommes ayant des rapports Sexuels avec des Hommes (HSH). La nouvelle politique nationale dite stratégie avancée a initié les tests rapides par piqûre au bout du doigt fait par les agents de santé à la suite de l'accompagnement des pairs.

Après une formation sur la communication interpersonnelle avec l'approche sexo-spécifique avec les questions de droit humain, les pairs éducateurs ont réalisé les activités de causeries éducatives autour des graines afin d'accompagner leur pair au centre de service adapté mis en place par l'Organisation internationale pour les Migrations à travers la subvention du Fonds Mondial.

Durant 6 mois, nous avons suivi les activités de dépistage de 2 pairs éducateurs de l'ONG l'Afrique Arc en Ciel Guinée (AAECG) travaillant sur le projet GIN-C-PLAN.

**Méthodologie:** L'activité de causerie éducative est menée autour des graines en toute sécurité par les PE avec des HSH qui sont venus soit pour des informations ou pour récupérer des condoms et du gel lubrifiant. Ils accompagnent au centre de service adapté tout HSH volontaire au test dans la plus grande confidentialité. Il arrive aussi que des demandes individuelles de dépistage se fassent.

Le dépistage se déroule dans un endroit pouvant avoir des commodités pour l'activité et respectant la confidentialité.

**Résultats:** De Janvier 2019 à Juin 2019 dans la ville de N'Zerekoré, 303 HSH ont été touchés par les messages de sensibilisation, 219 ont bénéficiés du paquet minimum (causerie éducative +référence + intrants de prévention), 25 conseillés testés et ayant récupéré le résultat avec 3 cas positifs Les cas positifs ont été référés à l'unité de prise en charge pour le bilan initial et la mise sous Traitement ARV selon les directives en vigueur.

**Conclusions et recommandations:** L'accompagnement pour le dépistage est une stratégie sécurisée qui permet de faciliter le dépistage des HSH dans les zones où la stigmatisation et la discrimination bat son plein. Cependant, le dépistage communautaire est la stratégie qui marche auprès des HSH car il permet de démedicaliser le dépistage et de le rendre encore plus proche de la communauté HSH autour des graines où la sérologie positive reste encore un tabou.

**Mots clés:** Graines, accompagnement, dépistage et HSH



## **FRPEC148**

### **Identifying Barriers to Post-exposure Prophylaxis (PEP) Use among Men who Have Sex with Men (MSM) in Sub-Saharan Africa: An Online Cross-sectional Survey**

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**Background:** PEP studies amongst MSM have been conducted in California, Thailand, Australia and South Africa but never before in sub-Saharan Africa region. Our study focused on identifying barriers to PEP use among MSM in sub-Saharan Africa.

**Methods:** An online cross-sectional survey was conducted, by reaching out to 17 LGBT associations in SSA, to identify barriers to PEP use in MSM. A total of 303 MSM from 22 countries in SSA completed the survey from 8 January 2019 through 23 February 2019. Descriptive statistics were generated; chi-square and backward stepwise logistic regression analysis were performed to evaluate the association between the outcome "PEP use" and other variables.

**Results:** Most of the men were aged 18-39, and the majority described themselves as homosexuals or gays 231/303 (76.2%). Rwanda had the highest number of respondents (122, 41%), followed by Nigeria, Ghana, and South-Africa.

The majority of respondents reported having heard about PEP (235; 79.4%), 121 (41%) used PEP, and 73.5% had correct knowledge of PEP. Four characteristics showed greater odds of not using PEP: MSM who had oral sex (OR 2.4, 95%CI:1.2; p=0.01), who have not heard of PEP (OR 18.9; 95%CI 4.7, 76; p= 0.01), MSM who did not have knowledge about HIV transmission (OR 2.2; 95%CI 1.1, 4.5; p= 0.02), and those who didn't know where to get PEP (OR 33.4; 95%CI 12.3, 90.6; p= 0.01). Two factors were found to have an association with PEP use: PEP availability at the health facility (p=0.01), as well as MSM's comfort to discuss sexuality with a healthcare provider (p=0.01).

**Conclusions:** There is a need for a collaborative effort between Government, Ministry of health, key players in HIV prevention, and MSM associations in SSA to remove these barriers for an optimal PEP utilization amongst MSM.

## FRPEC149

### Post Exposure Prophylaxis for HIV Infection after Sexual Assault: Understanding the Trend of Uptake in a Nigerian Tertiary Healthcare Institution

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**Background:** Antiretroviral post exposure prophylaxis (PEP) may be underutilized in sexual assault cases in Nigeria. This study evaluated the characteristics of survivors of sexual violence attending the President's Emergency Plan for AIDS Relief (PEPFAR) Center at the Adeoyo Hospital and reviewed the uptake, adherence, and outcomes of those initiated on PEP.

**Method:** In a retrospective cohort, data extracted from charts of the assaulted seen at the PEPFAR unit at Adeoyo Hospital from January 2018 to July 2019 were extracted. Data were collected describing sociodemographic characteristics, nature of sexual assault, HIV serostatus, and aspects of the PEP care cascade. Data gotten were analysed using descriptive statistics (SPSS IBM V 19).

**Results:** 278 assaulted persons who were not HIV positive before the assault were enrolled; 88.1% (n=245) were female; 12% (n=33) were male. 61.9% of the total population are single and 33.1% are married. Risk assessment was used to know if they qualify for PEP regimen. Adolescents and young adults of less than 30 years of age which are mostly students are more at risk of being raped as they have the highest frequency. The median age of the assaulted persons was 25 years with interquartile range of 15 years. Of 278 assaults with descriptions, 90% were vaginal assaults and 10% were penile-anal assaults. All assaulted persons were offered HIV testing and 278 accepted testing; 100% of assaulted persons tested HIV negative. In total, 100% of 278 sexual assault survivors initiated PEP. 100% completed required days of PEP, and 278 (100%) returned for repeat HIV test at 3 months. In conclusion, PEP was initiated in 100% of sexual assault cases.

**Conclusion:** The result indicated that those that came for PEP were compliant and the regime was effective with no victim tested to be positive to HIV infection. Most people still find it difficult to speak up about being raped as a significant number were hospital inpatients before they were referred for HIV Testing and Counseling. The attitude of parents toward PEP regimen is commendable. There is a need to leverage on referral system by using more effective methods.

## FRPEC150

### Accidents avec exposition au sang et aux liquides biologiques: Prévalence, Attitudes et pratiques du personnel soignant de l'hôpital régional de Kaolack

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**Background:** Les accidents avec exposition au sang (AES) sont très fréquents en milieu de soins mais sous notifiés. Différents agents pathogènes sont incriminés :VIH, VHB, VHC...

**Objectif:** Décrire les connaissances, attitudes et pratiques en matière d'AES du personnel soignant dans un contexte global où les différentes stratégies de prévention du VIH sont orientées vers la population générale.

**Methods:** L'étude s'est déroulée en Avril 2018 et était de type observationnel, transversal à visée descriptive et analytique. Les unités de sondage étaient constituées par les médecins et les paramédicaux de l'hôpital de Kaolack. Ont été inclus tout praticien exerçant dans l'hôpital incluant les stagiaires. N'ont pas été inclus les praticiens absents des services, non disponibles ou ayant refusé de participer à l'étude. Les variables étudiées ont été les caractéristiques socio-professionnelles, les connaissances attitudes et pratiques en matière d'AES et la conduite à tenir en cas d'accident.

**Results:** L'âge moyen des prestataires était de 35,3 ans  $\pm$  9,4 ans et le sex-ratio était de 2,02 en faveur des femmes. Ils étaient constitués en majorité (60,87%) d'infirmiers suivis des médecins (20%). Seuls 35,65% connaissaient leur statut sérologique du VIH. Pour l'hépatite B, 44,35% avaient été dépistés et 61 participants (53,04%) vaccinés mais seuls 37,1% avaient un statut vaccinal complet. Seuls 31,58 % des soignants amenaient toujours un réceptacle au lit du patient, 42,98% désadaptent les aiguilles et 44,74% les re-capuchonnent.

La prévalence des AES avec coupure, blessure ou projection était de 59,13% et la déclaration auprès du Médecin référent de 11,76%. Le service de maternité était plus concerné (65,51%) avec une différence non significative ( $p=0,64$ ).

Les praticiens les plus exposés aux AES étaient ceux qui jugeaient faibles les moyens de protection (74,56%;  $p=0,57$ ), ceux qui ne connaissaient pas leur statut VIH (60,81;  $p=0,62$ ) et ceux qui portaient systématiquement des gants si le statut sérologique au VIH était positif (61,19%;  $p=0,59$ ) avec cependant des différences statistiquement non significatives.

**Conclusions and recommendations:** Les AES sont très fréquents à l'hôpital de Kaolack et sous notifiés. La déclaration auprès du Médecin référent constituerait une double occasion de dépister le patient source mais également le prestataire victime. Une formation des prestataires en matière d'AES s'impose pour un respect rigoureux des bonnes pratiques de sécurité des soins.

## **FRPEC151**

### **Assessment of Knowledge, Attitudes and Practices towards Post Exposure Prophylaxis among House Officers in Teaching Hospitals in Osun State**

Agboola Progress

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**Background:** Adequate knowledge and practices on post exposure prophylaxis (PEP) against HIV among health care providers are crucial for HIV prevention. However there is limited data on PEP knowledge and practices from developing countries where the burden of HIV infection continues to increase. House officers are especially at risk as they are exposed daily to various procedures that involves contact with blood and body fluids. This study aimed to assess the knowledge of house officers on PEP, their practices in response to occupational exposure to HIV, as well as determinants of good Knowledge on PEP.

**Methods:** Cross sectional study was conducted among 92 doctors of house officer cadre working at either Ladoke Akintola University Teaching Hospital or Obafemi Awolowo University Teaching Hospital from June to July 2019. Data was collected using self administered questionnaire and analyzed using descriptive statistics.

**Results:** Of the 92 respondents, 50 (54.3%) were males while 42 (45.7%) were females with age ranges between 23-28 years. Significant proportions of respondents, 60 (65.2%), did not answer correctly the length of time to take PEP. However majority of the respondent 79 (85.9%) had good attitude toward PEP and significant number of the respondents, 62 (67.4%), had been exposed to blood, body fluids, needles or sharp objects at least once while caring for their patients. Among those exposed, 20 (32.2%) took PEP but the rest 42 (67.8%) did not take PEP. Among those exposed who took PEP, 9 (45%) completed taking the drug, however 11 (55%) did not complete the dose.

**Conclusions and Recommendations:** This study found knowledge gap on post exposure prophylaxis and poor practice but majority of study the respondents had positive attitude towards PEP. Therefore, I recommend routine training for all House officers on HIV PEP, and adequate adherence counselling as well as standard operating procedures for the observance of standard precautions.

## **FRPEC152**

### **Awareness and Usage of Post Exposure Prophylaxis (PEP) among Young Health Care Workers as a Tool in the Prevention of Human Immunodeficiency Virus (HIV)**

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**Background:** Post Exposure Prophylaxis has been one of the ways to reduce risk of HIV infection. Antiretroviral treatments given immediately after occupational exposure can stop the dissemination and establishment of the virus in the body. Young adults account for the largest percentage of new HIV infections. Young Healthcare workers need to be trained about the risks they may be involved in while providing healthcare services. The study was conducted with the aim of assessing the awareness and usage of PEP among young health care workers.

**Methods:** A cross-sectional based study involving the administration of questionnaire was carried out in hospitals among young healthcare workers. The research study was conducted in Osun state which is in South-Western region of Nigeria. Questionnaires were self administered by available and consenting individuals and confidentiality/privacy was assured. Questions from the questionnaire are used to assess Sociodemographic data of respondents , Respondent's knowledge about PEP, their attitude towards it and their usage of PEP. IBM Statistical package was used for analysis.

**Results:** A total of 50 respondents enrolled in this study, 23.1% were Doctors, 56.9% were Medical Laboratory Scientists , 10.8% were Nurses and 9.2% were hospital technical support staff. Majority(89.2%) were first degree holders with high level of awareness of PEP(95.4%). However, there was low level of knowledge on the use of PEP(29.2%). A total of 47.7% get exposed to HIV; of which only 32.3% take PEP after exposure. There was also an association between the use of PEP and working experience( $P < = 0.001$ )

**Conclusions and Recommendations:** It was observed that knowledge of the use of PEP increased with number of years spent working. Youths are expected to be agents of change within the society and this can only happen if they are given the proper and required training. Current training as regards the Knowledge and Usage of PEP should be intensified.

## FRPEC153

### Agressions Sexuelles, Indication Majeure de Prophylaxie Post Exposition au Cameroun : Urgence Sanito-sécuritaire !

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**Background:** La prophylaxie post exposition (PEP) est reconnue comme un des moyens de réduction de l'incidence du VIH dans la population générale. Cette stratégie de prévention consiste en l'administration précoce d'une trithérapie anti rétrovirale (ARV) après une exposition au virus de l'immunodéficience humaine (VIH) ; au mieux dans les 4 heures et au plus tard 72 heures après l'accident d'exposition. Malgré l'existence de la stratégie d'Information, Education, et Communication (IEC) mise en place pour la réduction des risques liés à l'exposition au VIH au Cameroun, il est constaté une recrudescence des accidents d'exposition sexuels.

**Methods:** Nous avons mené une étude rétrospective et descriptive sur des données de 2007 à 2016 à l'hôpital de jour de l'hôpital central de Yaoundé, centre de prise en charge d'excellence du VIH au Cameroun. Avec pour objectif de décrire les indications de PEP. A partir des registres, tous cas d'accident d'exposition sexuelle ayant bénéficié de PEP était répertorié.

**Results:** Nous avons recensé **287 cas** d'accidents d'exposition sexuelle sur **626** consultations post exposition accidentelle au sang et autres liquides biologiques (**45,84%**). Les adolescents et adultes jeunes étaient les plus concernés. La gente féminine était représentée à 77,4%, majoritairement constituée des élèves /étudiants (47,3%). Les agressions sexuelles étaient le principal type d'exposition, suivies des ruptures accidentelles de préservatifs masculins soit respectivement 74,2 % et 15,3%, et les rapports sexuels non protégés (10%). Dans 94,1 % de cas, le statut sérologique de la personne source était inconnu. Le délai moyen de consultation après l'exposition était de 16,93 heures : seulement 0,5 % avait consulté dans les 4 heures après l'exposition, et 17% avaient consultés 12 heures après l'exposition. La proportion de personnes ayant consultée après 72heures était d'1%.

**Conclusions and Recommendations:** La prévalence des accidents d'exposition sexuelle est élevée au Cameroun. Ils sont dominés par les agressions sexuelles, principale indication de PEP. Le délai de consultation n'étant pas respecté, des communications ciblées à l'endroit des jeunes, notamment sur la technique du port du préservatif et la précocité des consultations post exposition sexuelle doivent être renforcées. L'organisation des comités de vigilance dans les communautés, en collaboration avec les forces de l'ordre pourrait être un moyen de réduction des agressions sexuelles.

## FRPEC154

### **Friends, Family and Future: Motivators for PrEP Persistence among Key Populations in Kenya**

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**Background:** In 2015, WHO recommended oral pre-exposure prophylaxis (PrEP) for people at substantial risk of HIV infection. As PrEP scales up in settings throughout sub-Saharan Africa, persistent PrEP use has been documented as low among multiple populations. We assessed positive factors enabling PrEP persistence among beneficiaries of Jilinde, a large-scale PrEP program for key populations in Kenya funded by the Bill & Melinda Gates Foundation.

**Methods:** Within the context of the Jilinde program, 10 focus group discussions and 8 in-depth interviews were conducted with adolescent girls and young women (n=21), female sex workers (FSW) (n=28) and men who have sex with men (MSM) (n=23). Participants had been using PrEP for at least one month and were recruited from service delivery sites from February 2018-April 2019. Data were collected by trained study staff in Swahili, audio recorded, translated and transcribed. We described themes, centering around positive motivators for continued PrEP use, using a social ecological framework.

**Results:** The strongest individual-level motivator was desire for protection against HIV, for which PrEP was described as "the best option" and "a sure bet." This was supported by participants continuing to test negative for HIV. Personal hope for the future was often mentioned, particularly by FSW, who described motivation to provide for their children. Social and family contexts were important: for FSW in particular, motivations to use PrEP were complex regarding exposure through spouses, regular partners and casual partners. At the interpersonal level, support through informal networks and knowing others who used PrEP motivated PrEP persistence. MSM especially mentioned peer support groups as resources for emotional support, motivation and sharing experiences or concerns. From the health system, all groups highly valued provider follow-up, stating it made them feel cared for and encouraged them to persist despite challenges.

**Conclusions:** Individually, PrEP users in key populations described being motivated to persist by continued protection against HIV infection and dreams of the future. Interpersonally, social support from family, friends and peer groups was key. Organizationally, provider follow-up helped users feel empowered to persist. Efforts to scale PrEP in Kenya should build these motivators into structured approaches to improve PrEP continuation rates among key populations.

## **FRPEC155**

### **Microplanning in PrEP Delivery for Key Populations. Can It Work?**

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**Issues:** With an efficacy of 92% preventive capabilities against HIV when taken daily, PrEP has proved to be an indispensable addition to the HIV combined prevention among high risk populations. Despite feasibility studies showing relatively good acceptability of PrEP by sex workers in Kenya, implementation has been challenging due to sub-optimal uptake rates and high attrition among the population. This has caused a paradigm shift to exploring interventions to ensure robust sensitization, mobilization, and linkage of potential users.

**Descriptions:** Micro-planning in HIV programming refers to provision of services by a Peer Educator (PE) based on individualized and unique peer needs, as deduced from frequent interaction. The PE is able to plan around individuals and tailor makes their services in regards to their specific habits, needs, risks, and vulnerabilities.

Sex Workers Outreach Program (SWOP) utilizes a Peer Led model for demand creation of HIV prevention and care services. The model employs micro-planning, whereby every Peer Educator (PE) is attached to a hotspot(s) and serves 60-80 peers in their hotspot. The Peer Educator is responsible for demand creation for the services, referral for enrolment, and follows up the Sex Worker (SW) until they exit sex work or permanently change hotspots.

**Lessons learned:** In the regions of Nairobi County covered by SWOP, there is an estimated size of 30725 Female Sex Workers (FSW) and 2443 Male Sex Workers (MSM). On average, the program uniquely contacts 12,000 FSWs and 700 MSMs per month. The contacted number refers to the number reached with health education and commodities as a minimum package.

PEs form the strongest links between programs and the SWs, as they contact them at the hotspots repeatedly. As such, they are able to target and reach potential PrEP users with sensitization messages and mobilize them for uptake. Additionally, they can easily do the follow up, consequently helping the program curb and/or address attrition.

**Next steps:** Programs offering PrEP should intensively train PEs on PrEP and build their capacity to sensitize on the same. Their built trust through familiarity will help with better acceptability, uptake, and sustainability on PrEP. Additionally, programs should install mechanisms to demystify issues timely to curb misconception induced attrition.



## FRPEC156

### **Uptake of HIV Pre-exposure Prophylaxis (PrEP) in Clinical Settings in Western Nigeria: Are Healthcare Providers Prepared for the Key Populations?**

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**Background:** HIV pre-exposure prophylaxis (PrEP) can decrease HIV incidence among several high-risk populations. In order to successfully implement PrEP, healthcare providers will need to have knowledge about counselling, monitoring and drug adherence. This study was carried out to determine the awareness, practice and preparedness of healthcare professionals to prescribe PrEP in clinical settings especially to key populations in our communities and identify the factors associated with or encouraging its prescription.

**Methods:** This cross-sectional study was carried out in randomly selected primary, secondary and tertiary level hospitals in Western Nigeria. The target population were physicians and nurses largely involved in the antiretroviral clinics in the hospitals. Data was collected by trained volunteers and supervised by appointed supervisors by a face-to-face interview. All data were statistically analysed, using Statistical Package for the Social Sciences (SPSS) and statistical test of significance was performed with Chi-Square test.

**Results:** A total of 256 consenting respondents participated in the study with a mean age  $\pm$  SD of  $38.52 \pm 9.29$  years. A total of 89.8% of the respondents have heard about PrEP, with 54.3% of them aware of both oral and topical PrEP while only 4.3% have ever prescribed PrEP. The main factor associated with PrEP prescription was work experience ( $\chi^2 = 20.815$ ,  $df = 1$ ,  $p = 0.001$ ). Work experience has lower association with PrEP prescription (OR: 0.88, 95% CI: 0.82 - 0.95).

**Conclusions and Recommendations:** Healthcare professionals in public hospitals in Nigeria are PrEP aware and willing to prescribe, but few have actually ever done the prescription. Regular supply of drugs for pre-exposure prophylaxis purpose and addressing the potential safety issues and medication-related adverse effects will help aid the PrEP implementation effort nationwide especially with focus on the key populations of men having sex with (MSM) who are in a hostile environment in our own neighbourhood.

## FRPEC157

### Programmatic Outcome of Pre-exposure Prophylaxis for HIV Prevention among High Risk Population in Public Facilities of Eswatini

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**Background:** Pre-exposure prophylaxis (PrEP) is a prevention strategy for people at risk of HIV acquisition. Yet, programmatic feasibility in resource limited and high HIV prevalence settings remain widely unknown. We describe programmatic outcomes of a PrEP programme under routine conditions from rural Eswatini (formerly Swaziland) to inform scale-up.

**Methods:** PrEP (Tenofovir+Lamivudine) was offered to ≥16 years old clients at risk of HIV acquisition at 10 primary health facilities and 2 community sites in the Shiselweni region, from September 2017 to June 2019. The target populations were young and pregnant/lactating women, key populations, sero-discordant couples and patients with sexually transmitted infections. We describe the PrEP cascade and used multivariate logistic regression to assess predictors of PrEP initiation and engagement in PrEP program at 6 months after initiation.

**Results:** Of 2,479 HIV-negative individuals screened for increased risk of HIV acquisition, 923 (37%) were young women (16-24 years), 826 (33%) were pregnant/lactating women, and 376 (15%) lived in sero-discordant relationships (mutually not exclusive). Entry points were reproductive healthcare services (n=1133, 46%), general outpatient departments (n=813, 33%), and client's self-interest (n=483, 19%). Of 2,003 (81%) people at substantial risk of HIV infection, 980 (49%) were interested in PrEP, of whom 658 (67%) were screened for clinical eligibility. After clinical screening, 33 did not start PrEP because they were presumptive (n=18) and confirmed (n=2) cases of acute HIV infection, had hepatitis B infection (n=4) and had creatinine clearance < 60 ml/min (n=9). Out of those interested and clinically eligible, 622 initiated PrEP (75% women) with 91% of them on the day of risk screening. Predictors of PrEP initiation among people screened were self-interest in PrEP, presentation at the community sites, perceived higher risk of HIV acquisition and people in sero-discordant relationship. Continued engagement in PrEP at 3, 6, 12 and 18 months were 42%, 33%, 21%, and 14% respectively. The only predictor of continued engagement at 6 months was having sero-discordant relationship. While no sero-conversion occurred during PrEP, one occurred soon after discontinuation.

**Conclusions and recommendations:** The provision of PrEP in public facilities appeared feasible. However, long-term engagement emerged as a possible challenge necessitating further investigation in this setting.

## FRPEC158

### High Acceptability of Pre-exposure Prophylaxis among Men who Have Sex with Men in Kampala, Uganda: HIV Risk Perception and Sex Orientation

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**Background:** The World Health Organization (WHO) recommends use of pre-exposure prophylaxis (PrEP) in key populations which has been found to reduce annual HIV incidence to < 0.5%. Key populations including men who have sex with men (MSM), female sex workers, fisherfolk, truck drivers have the highest HIV prevalence in Uganda. There is need to identify factors for improving PrEP implementation in order to reduce new infections among MSM. This study was therefore conducted to assess acceptability of PrEP in MSM communities in Kampala, Uganda.

**Methods:** We conducted a sequential explanatory mixed methods study in MSM communities in three divisions of Kampala from February to June 2019. We collected data on 93 participants for the survey and another 8 HIV negative MSM for the focus group discussion. Using purposive and snowball sampling, the index MSM was recruited from the sexually transmitted infections (STI) clinic in Mulago hospital. Quantitative data was collected using Open Data Kit (ODK) and exported to STATA 15.1 for analysis. Acceptability was measured using proportion of the MSM willing to use PrEP. Prevalence ratios were measured using a modified Poisson regression with their 95% confidence intervals (CI) and p-values. Transcripts from the qualitative data were coded using general inductive method and the emerging themes identified using Atlas.ti 8.3 software.

**Results:** A total of 93 MSM were recruited. The mean age was 28±5 years; 15 (16.1%) never used condoms and 11 (11.8%) reported to be HIV positive. Acceptability of PrEP was 82.8% (95%CI 73.6-89.3). Female sex orientation (PR= 1.20, 95%CI 1.02-1.40), sometimes concerned about acquiring HIV (PR=1.79, 95%CI 1.10-2.91 ) and always concerned about acquiring HIV (PR=1.83, 95%CI 1.12-3.00) were the factors associated with acceptability of PrEP. Perceptions about being at high risk explained the high acceptability. Concerns about stigma and discrimination, side effects of PrEP were perceived to hinder acceptability of PrEP.

**Conclusions and recommendations:** There was high willingness to use PrEP in the MSM communities. Programs for scaling-up PrEP for MSM need to include education and address issues of stigma.

## FRPEC159

### Acceptability of Pre-exposure Prophylaxis among Men who Have Sex with Men in Côte d'Ivoire: A Quantitative Study

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**Background:** In West Africa, Côte d'Ivoire carries one of the heaviest burden of the Human immunodeficiency virus (HIV) epidemic. HIV serodifferent couples and most vulnerable people such as men who have sex with men (MSM) contribute disproportionately to the thousands of new HIV infections occurring annually. MSM have limited access to HIV prevention and care services. Hence, implementing a prevention tool like pre-exposure prophylaxis (PrEP) that is under their control could reduce significantly HIV transmission. This study was conducted in Bouaké, the 2<sup>nd</sup> largest city of the country, to assess PrEP acceptability among MSM, in anticipation of its adoption by national health authorities.

**Methods:** A respondent driven sampling method was used to recruit 201 adult and HIV seronegative MSM who reported at least one episode of anal sex with a man during the last 12 months. Participants were asked on their intention to use PrEP as an HIV prevention tool if it was made available. Answers were classified according to a five-point Likert scale: 1-definitely not, 2-probably not, 3-neutral, 4-probably, and 5-very probably. The acceptability of PrEP was assessed based on the fifth level. The Survey-Logistic procedures were used to take into account participants' network sizes while studying associations with different independent variables including perceptions, behavioural and sociodemographic factors.

**Results:** Participants were young (mean age = 25 years), educated (82% of secondary and postsecondary school) and single (95.5%). On average, 3.4 episodes of anal sex were reported monthly and 2 out of 5 MSM did not use a condom at last sex. Most MSM (72.6%) had heard of PrEP before enrolment in the study. Overall, 35,3% reported that they would use PrEP very probably if it was made available. Factors associated positively with this intention, after adjusting for potential confounding variables, were postsecondary school ( $p=0,0007$ ), sexual role (being active as compared to being versatile,  $p< 0.0001$ ), alcohol consumption ( $p=0,0195$ ), willingness to have unprotected anal sex with PrEP users ( $p=0,0107$ ), and being sexually active during the last six months ( $p=0,0044$ ).

**Conclusion and Recommendation:** PrEP implementation among MSM in Côte d'Ivoire is possible provided that these men have access to awareness raising campaigns explaining the utility of PrEP from both an individual and public health perspective.

## FRPEC160

### **Integrating Peer Mobilizers to Create Awareness and Demand for Oral Pre-exposure Prophylaxis (PrEP) among Female Sex Workers (FSWs) in Public Health Facilities in Nairobi County, Kenya**

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**Issues:** Key populations (KP) and largely female sex workers (FSWs) contribute a third of HIV burden in Kenya. In 2017 when PrEP was introduced in Kenya, an easy-to-tap and robust peer education (PE) system existed through the national key population program for drop in centres (DICEs). National Aids and STIs Control Programme (NASCOP) mapped and allocated hotspots to DICEs. However, pathways for demand creation for public facilities remained unclear. The Jilinde project funded by the Bill & Melinda Gates Foundation, has been at the fore of offering PrEP to FSWs using peer-led approaches. In this abstract, we describe the approach, outcomes and lessons learned in establishing a FSWs mobilization approach for PrEP services in public health facilities in Nairobi County, Kenya.

**Descriptions:** In 2017, Jilinde identified the Urban Slums Initiative (USI) an existing program working with FSWs to collaborate in establishing a peer mobilization structure. The 45 identified mobilizers by USI were trained using NASCOP Training Curriculum' on PrEP, communication skills and mandated to identify peers through a snowballing approach at their hotspots. The mobilizers were provided with job aids including brochures with frequently asked questions, penile model for condom demonstration, notebooks with PrEP information, print materials for dissemination and data reporting tools. The mobilizers were formally introduced to 10 public health facilities and were offered a monthly stipend of \$35.

**Lessons:** In the period between January 2018 and July 2018, the peer mobilizers had reached 2627 FSWs with PrEP information; referred 1772 to the facilities for services and 281 were initiated on PrEP. This contributes to a 10.6% conversion rate for every FSW reached with PrEP information. Also, keeping the FSW's mobilizers on stipend, facilitated dependence on continued donor funding which was not sustainable. The public health facility model therefore, conflicted with the KP program PE structure because of the hotspot allocation being mapped to DICEs instead of public facilities.

**Next steps:** Provision of HIV prevention services including PrEP to willing FSW through public facilities alongside DICEs is feasible with the support of FSW peer mobilisers who are able to create demand and link FSWs who are at ongoing HIV risk and do not want to be associated with DICEs at their hotspots to public facilities.

## **FRPEC161**

### **Awareness, Understanding and Challenges Regarding PrEP in Cameroon**

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Despite the high risk of HIV in men who have sex with other men (MSM) in Cameroon, with an infection prevalence of 37.2%, related data on this population are very scarce. Between October 2017 and March 2018, we conducted an online survey in two major cities - Yaoundé and Douala - with the aim of exploring MSM level of awareness and understanding of PrEP.

Participants were recruited online through web dating sites and applications. The online survey was available for anyone interested in participating. It was widely promoted with the support of two local community-based organisations that routinely provide comprehensive wellness programmes to meet MSM HIV-related needs. The study's statistical analysis focused on factors associated with PrEP awareness. We have also collected descriptive data on understanding of PrEP. Eligibility criteria included 1) living in Cameroon, 2) being male, 3) being 18 years or older, and 4) reporting at least one sexual encounter with a man during the previous six months. With a mean age of 27 years of age, almost half of the sample ( $n=364$ ) had at least completed high-school (46%), yet 54% were unemployed. Sixty-percent had had more than two sexual partners during the six months preceding the survey, and more than half of the sample reported a recent HIV test. Only 30% ( $n=107$ ) were aware of PrEP. Awareness was associated with education level (high-school diploma OR=1.725, 95% CI 1.036-2.873), knowledge of antiretroviral therapies (OR= 4.557 [2.388-8.699]) and a less than six months HIV test (OR=9.484[2.743-32.790]). Our study revealed that local community based organisations (33%), online media (23%) and peers (17%) are the major sources of information on PrEP. Confusion remains however, between PrEP and Post-Exposure Prophylaxis.

Findings suggest that it is important to acknowledge and consider PrEP as part of a combined HIV prevention for MSM, through local community-based interventions, digital campaigns and training of healthcare workers on MSM health issues.

## FRPEC162

### How Is PrEP Retention Reported and Where Are We Now? A Systematic Review

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**Background:** Despite the efficacy of oral pre-exposure prophylaxis (PrEP) in preventing HIV, PrEP retention is not well understood. This review describes methods for retention measurement and published retention across populations.

**Methods:** We searched databases and HIV conference abstracts for studies directly reporting retention data on oral PrEP. We mapped data on participants retained along the PrEP cascade, including screening, eligibility, enrollment, and at months: 1, 3, 6, 12, and 24+. We hoped to account for the fact some people who start PrEP may experience changing levels of risk where stopping and starting may be advised. As such, two definitions were used: I. proportion of those enrolled who are retained in PrEP care at different time points, and II. the proportion of those still indicated for PrEP (still HIV-negative and at risk of HIV) retained in care.

**Results:** Thirty-nine studies were included: 32 trials/demonstration projects and seven routine implementation. Data on screening, eligibility and enrollment were provided by 10 studies, with an average 61.0% of those screened eligible and 63.1% of those eligible enrolled. Nine studies included type I retention data for at least three cascade stages from months 1 to 12, with average retention of m1=74.5%, m3=69.6%, m6=59.1% and m12=48.1%.

As per the above definition, type II retention data were not reported by any studies. Six studies reported something similar to type II retention, including retention among those still HIV negative (n=2) or retention among those who were still on PrEP at the previous visit (n=4). Others reported person-years (n=7) or median time followed (n=2).

Few studies reported retention among different populations along the cascade. The highest rate of type I retention at 12 months was seen among women (80.5%, n=1), followed by people who inject drugs (75.4%, n=2), men who have sex with men (MSM) or MSM/transgender women (68.9%, n=12), and serodiscordant couples (68.1%, n=2).

**Conclusions and Recommendations:** Differences in PrEP retention reporting poses challenges for comparison. The term retention is not standard, with some preferring continuation, persistence, or effective use. Both retention types I and II (as defined here) have important implications: type I is important in estimating resource needs, while type II provides insight into how eligible clients are retained in PrEP care. Efforts are needed to standardize definitions and encourage reporting of both types.

## FRPEC163

### **Uptake and Continuation of Oral PrEP among Adolescent Girls and Young Women: Lessons Learned from the SHAZI HUB in Zimbabwe**

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**Issues:** Programs offering oral pre-exposure prophylaxis (PrEP) to adolescent girls and young women (AGYW) in Zimbabwe have experienced lower than expected uptake and high discontinuation of PrEP.

**Description:** The SHAZI HUB (HUB) is a youth drop-in center, located within a private hospital but supported by Ministry of Health, that provides comprehensive sexual health and HIV services to young people aged 16-24 in Chitungwiza. Since January 2018, 400 AGYW (out of 614 total) have been offered PrEP at the HUB, 23% of whom have initiated it. Continuation at 1, 3, and 6 months was at 98%, 75% and 76% respectively. Through dialogues with staff and AGYW clients, we conducted a program review to explore what is contributing to this high continuation of PrEP.

**Lessons learned:** The HUB model works through peer education and outreach, using IEC materials developed in collaboration with clients. Those expressing interest in PrEP are accompanied or, when not immediately available, referred to the HUB, where they are offered HIV testing, a risk and PrEP readiness assessment, STI and pregnancy screening, and follow-on services as warranted. Those initiating PrEP are followed-up with a call or text by peer educators at 48 hours, and at 5, 15, and 28 days with support managing adherence challenges. During 3-month follow-up, clients are contacted 2 times/month on average. Home visits are made for clients lost to follow-up, and clinic visits support those with persistent side effects. Dialogues revealed that AGYW value the consistent follow-up, the HUB's accepting and private environment, the integrated services provided, and the peer educators' support in disclosing PrEP use. As reported by one client whose mother was initially against her using PrEP, after speaking with the peer educator "*my mother is now my strongest supporter.*" Program management and providers highlighted the success of the HUB's approach in "*...not chasing initiations, but (in) looking for clients who are knowledgeable about and ready to take PrEP.*"

**Next steps:** The HUB's focus on PrEP education and on identifying those who are ready to start and stay on PrEP, along with strategically timed phone/messaging supportive follow-up, emerged as the key program elements contributing to high continuation of PrEP at the HUB. Lessons learned will be shared with the National PrEP Technical Working Group and implementing partners in Zimbabwe, highlighting aspects of the program that could be applied in other settings.



## FRPEC165

### Lessons Learnt from DREAMS Innovation Challenge Project on Demand Driven PrEP Use for Adolescent Girls and Young Women (AGYW) in Kenya

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**Issues:** UNAIDS reported that in 2017, as many as 7,000 new infections occurred each week among the most vulnerable AGYW in Eastern Africa and AIDS remains the leading cause of death for adolescent girls in Africa according to Joint United Nations Program on HIV/AIDS 2014 report "The gap report." Geneva: UNAIDS.

Despite the availability of the historical HIV prevention strategies such as A-B-C (abstinence, be faithful, use condoms) too often it's not within a girl's power to control use of this options. This is attributed AGYW engaging in transactional sex, inability to negotiate condom use, sexual violence, multiple partners and cross generational sex. Broadly there is lack of access and utilization of sexual reproductive health services due to unfriendly health providers and inappropriate operation hours of public health facilities in Kenya

**Descriptions:** Through PEPFAR (The United States President's Emergency Plan for AIDS Relief) partnership and JSI (John Snow Inc.) grant management, Bar Hostess Empowerment and Support Program (BHESP) implemented a two and a half years' DREAMS Innovation challenge project. BHESP innovation entailed use of an AGYW-led demand-driven model to enhance access and uptake of PrEP. The innovation emphasized the benefits of PrEP to AGYW to create and sustain PrEP demand and use youth-friendly facilities (Safe spaces) for access to integrated HIV/SRH services.

Demand creation entailed entertainment in health education, through radio shows, social media, musical events, PrEP champions & celebrities, sports tournaments, and beauty therapy sessions to attract and retain the AGYW in the program.

BHESP went further and embedded linkages to peer educators at community level and support groups to bolster PrEP continuation.

**Lessons learned:** It came out clearly that youth-friendly innovations such as safe spaces and experienced-based service delivery through engaging AGYW who are using PrEP as peer educators at all stages of the project is effective, as the young people are more inclined to relate and communicate more effectively with their peers and also more inclined to seek integrated SRH services in a youth-friendly environment, like in the BHESP safe spaces.

**Next steps:** To scale up PrEP access to the AGYW youth friendly Innovations should be adopted as this is the only way to optimize use of oral PrEP as HIV prevention option as well as access to integrated SRH services. This will in deed avert HIV/STI.

## FRPEC166

### "PrEP Has Kept Me HIV-negative": PrEP Use and Experiences among Serodifferent Couples in Rural Kenya and Uganda

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**Background:** PrEP experiences of serodifferent couples is critical to inform open label PrEP implementation.

**Methods:** Universal PrEP was offered in a population-based study (NCT01861603) in Kenya and Uganda from 2016-7. We explored HIV risk and PrEP experiences via 16 semi-structured and sex- and sero-status specific focus group discussions (FGDs) with 118 participants (63 male, 75 female) in five communities in 2018. Participants were purposively selected using clinic-verified HIV status and membership in serodifferent couple, age, and sex. Audio transcriptions were coded using a framework developed based on the health belief model and collaboratively analyzed.

**Results:** High perceived susceptibility to HIV and efficacy of PrEP motivated PrEP-use. Known sero-difference, inconsistent ARV use by HIV positive partners, inability to negotiate condom, concurrent partnerships, cultural practices such as wife inheritance, and alcohol/drug-impaired decision-making contributed to heightened risk perceptions. However, fears were tempered by the widespread availability and efficacy of ARVs. Some felt that PrEP was unnecessary due to the belief that long-term discordant relationships resulted from one partner's natural immunity to HIV. Sero-negative partners were fearful of acquiring HIV and the associated ARV pill burden and side effects. Among couples who used PrEP, benefits included lower risk of infection (confirmed by repeat HIV-negative results), reduced anxiety about acquiring HIV, increased frequency of condomless sex (and intimacy), and reduced partner conflict about sex. Couples reported simultaneously timing their pill-taking (PrEP and ARVs). However, benefits were highly gendered: women (HIV-) felt protected by clandestine PrEP use when unable to negotiate sex, while men (HIV-) viewed PrEP as a vehicle to engage in multiple partnerships. HIV status non-disclosure and stigma, negative PrEP side effects, and pill burden/size undermined self-efficacy. Mistrust of researchers and fear of western conspiracies fueled PrEP-related stigma. Provider support and management of side effects supported self-efficacy among users, while positive interactions with providers and PrEP testimonials served as important cues to action.

**Conclusions:** Messaging to serodifferent couples should highlight improved relationships, intimacy, and increased agency for women. Providers were instrumental for PrEP success by addressing side effects and administering couples-based counseling.

## **FRPEC167**

### **"I Have Succeeded on My Wish..." a Qualitative Study to Explore Experiences of PrEP among Clients and Health Workers in Eswatini**

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**Background:** Although pre-exposure prophylaxis (PrEP) holds great potential as a female-controlled HIV prevention tool, experiences with its use remain limited in Africa. A PrEP demonstration was performed in a region of Eswatini to explore the influences of PrEP initiation and continuation among vulnerable populations.

**Methods:** Between July and November 2018, we conducted two in-depth interviews (IDI) with 20 adolescent girls and young women (AGYW) and pregnant and breastfeeding women (PBW) on PrEP, and one-time IDIs with 14 AGYW and PBW who declined or discontinued PrEP. IDIs were conducted with 9 health workers, and 2 focus group discussions were held with men. Four days of non-participant observation were conducted in primary and secondary health facilities. Interviews were audio-recorded, transcribed, and analysed thematically, using an inductive approach.

**Results:** Five themes explained PrEP initiation and continuation: 1) HIV risk perceptions; 2) feelings of autonomy and responsibility; 3) disclosure and social support; 4) drug-related issues; and 5) patient-provider relations.

Perceptions of HIV risk drove PrEP start and continuation, and were shaped by challenges in negotiating protected sex, whereas PrEP decline and discontinuation often happened when partners tested negative. In contrast to condoms, women perceived PrEP as enabling them to take responsibility for, and control of their health. However, continuation of PrEP was often linked to disclosure to partners or family members, and accessing emotional and financial support. Discontinuation of PrEP was triggered by side-effects, pill burden or misconceptions that PrEP is lifelong, thus offering little perceived advantage over lifelong HIV treatment. Interactions with health workers influenced women's PrEP engagement in different ways: some women felt pressured to initiate PrEP, or were fearful of reprimands if they missed appointments.

**Conclusions:** Interventions to support PrEP engagement should include ongoing, client-centred counselling that acknowledges fluidity in women's HIV risk and their perceptions of HIV risk which may not align with screening tools in clinics. The female empowerment potential of PrEP may be undermined without community-level interventions to promote PrEP acceptance among women's partners and families.

**Keywords:** Pre Exposure Prophylaxis, PrEP, empowerment, Adolescent Girls Young Women, Pregnant and Breastfeeding Women

## FRPEC168

### Early Changes in Condom Use among General Population Women on Pre-exposure Prophylaxis in Kenya

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**Background:** Women across the globe and in sub-Saharan Africa remain unduly affected by HIV. In Kenya, HIV prevalence among women is 5.2% compared to 4.5% for men. Pre exposure prophylaxis (PrEP) holds potential to reduce new infections and in Kenya PrEP has been available to those at substantial risk of HIV since 2017. Among people on PrEP, risk compensation (adopting high-risk sexual behavior after starting PrEP) may attenuate prevention effectiveness and reduced condom use may increase unintended pregnancies and sexually transmitted infections. We evaluated early changes in condom use among general-population women initiating PrEP through Jilinde, a national scale-up program supported by the Bill & Melinda Gates Foundation in Kenya.

**Methods:** We analyzed program data collected from February 2017 - June 2019. Socio-demographic and clinical data were collected at PrEP initiation and during routine monthly follow-up visits using standard ministry of health forms. Analyses included women with at least three months of follow-up and who did not self-identify as sex workers. Regression analyses with generalized estimating equations (GEE) were used to compare the odds of self-reported condom use at month three compared to baseline and identify baseline characteristics associated with changes in condom use.

**Results:** A total 597 women enrolled on PrEP and continued for at least three months. Mean age was 30 years (sd=13). Majority were married (499, 84%) and were in a HIV discordant relationship (364, 61%). Self-reported condom use was 71% at baseline compared to 85% at month three (P=0.001). In GEE analyses, women had two-fold odds of using condoms at month three compared to baseline (OR 2.29, 95% CI 1.84-2.84) and changes in condom use between the two time points was associated with being married (OR 1.84, 95% CI 1.20-2.84), being in a discordant relationship (1.57 95% CI 1.0-2.46) and self-reported sex under influence of drugs and/or alcohol in the past month (0.32 95%, CI 0.18-0.57). In the multivariable model, the odds of condom use at month three were still greater compared to baseline (AOR 2.36, 95% CI 1.88-2.96).

**Conclusions and Recommendations:** We found higher odds of self-reported condom use when continuing on PrEP. It is plausible that thorough counselling provided during PrEP follow-up visits contributed to the observed changes. PrEP scale-up programs should strive to continuously provide comprehensive counselling on risk reduction to mitigate potential compensatory behaviours.

## **FRPEC169**

### **Increasing Visibility, Uptake and Retention of Pre-exposure Prophylaxis (PrEP) Users among Men who Have Sex with Men (MSM) in Nairobi through Let's Get Real Events**

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**Issues:** MSMs contribute 15% of new Human Immunodeficiency Virus (HIV) infections in Kenya. In new findings released, Nairobi County has a prevalence of 6.1% higher than the national prevalence which is 4.9%. PrEP has proved to reduce infections by 99%. However there is a gap in accessing PrEP attributed by structural barriers such as stigma.

**Descriptions:** Four LET GETS REAL events were conducted in four hot spots where MSMs regularly hanged out. At the registration one was given a T-shirt branded LETS GET REAL WITH PrEP and a PrEP wrist band. Participants took photos using their phones in a PrEP branded photo booth. They then posted the photos in their respective social media platform using the hashtag LETS GET REAL. Attendance list that had participants contacts was also signed for follow up purposes. Participants were given a voucher that entitled one to two soft drinks. A community PrEP champion was present to motivate others on PrEP.

**Lessons learned:** 576 registered for the event. 398 (69%) of the participants were aged 18-24, 153 (26%) aged 25-30 and remaining 5% above 30 years. 478 (82.9%) used the hashtag to create PrEP awareness in different social media platforms. Visibility was measured through increase in likes, following, comments on Civil Society Organisations (CSO) partner digital pages. 184 (31.3%) were initiated on PrEP at the clinic days after the events. 53 (7.1%) lost to follow up were restarted on PrEP at the clinic.

**Next steps:** It is worth concluding from the results that creating PrEP visibility and bridging the gaps in access of PrEP among MSMs is key in curbing new HIV infections by increasing PrEP uptake. Individuals should take photos with their own phones in designated photo booths.

## FRPEC171

### Awareness and Willingness to Use HIV Pre-exposure Prophylaxis (PrEP) among Men who Have Sex with Men in Rwanda

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**Background:** Men who have sex with men (MSM) in Rwanda are disproportionately affected by HIV. HIV pre-exposure prophylaxis (PrEP) is a major component of HIV prevention, however, little is known about the extent to which Rwandan MSM are aware of PrEP or willing to use it. We assessed PrEP awareness, willingness to use PrEP, and preferences for PrEP formulations, as well as identified predictors of these outcomes.

**Methods:** We conducted a cross-sectional analysis using data from a longitudinal cohort study of Rwandan MSM. Participants were recruited from community-based MSM associations in Kigali, self-identified as MSM, were HIV negative at the cohort baseline visit, and returned for the second study visit during 2016-2017. Outcomes were PrEP awareness, willingness to use PrEP and preferred PrEP formulations. Predictors included demographic variables, who participants lived with (sex partner, family, alone, other) and number of sex partners in the past 6 months. We used Fisher's exact tests and multivariate logistic regression models to identify factors associated with outcomes.

**Results:** Among 225 participants with available data, 30% (n=67) were  $\leq 23$  years old, 41% (n=90) lived alone, 37% (n=80) had between 2 to 4 male sex partners, and 65% (n=143) reported insertive or receptive anal sex in the past 6 months. In total, 48% (n=104) of participants were aware of PrEP, awareness was more likely among those living with a current sex partner compared to those living alone (64% vs. 50%,  $p=0.022$ ). Among all participants, 83% (n=181) were willing to use PrEP, this was more likely among those reporting insertive anal sex without condoms compared to those who never had insertive anal sex (100% vs. 88%,  $p=0.04$ ). In multivariable analysis, no characteristics predicted awareness of or willingness to use PrEP. Among participants willing to use PrEP, 39% (n=70) preferred a daily pill and 16% (n=29) preferred an injection once a month. Participants living with a current sex partner, compared to those living alone, were more likely to prefer a daily pill (87% vs. 70%,  $p=0.008$ ), adjusted odds ratio [aOR] 1.59, 95% CI 1.01-2.50. Participants with  $\geq 5$  sex partners, compared to those with no partners in the past 6 months, preferred a monthly injection (64% vs. 48%,  $p=0.04$ , aOR 1.50, 95% CI 1.001-2.24).

**Conclusions and Recommendations:** Among MSM in Rwanda, there is a relatively high level of awareness about PrEP and a high willingness to use it. These results suggest that PrEP would be acceptable if available for this key population.

## FRPEC172

### Détection du Chromosome Y et Comportement à Risques chez les Professionnelles du Sexe dans une Étude de Démonstration de la Prophylaxie Pré-exposition Orale à Dakar, Sénégal

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**Background:** Plusieurs essais sur la PrEP à base de Truvada récents, randomisés et suivis se sont révélés efficaces dans la prévention à l'infection du VIH chez les PS. Le préservatif est toujours recommandé en plus de la PrEP en raison des problèmes d'adhérence et aux risques d'acquisition des autres IST. Le coût du préservatif, la rémunération avantageuse des rapports sexuels non protégés, concourent à la réduction de l'utilisation du préservatif. Les outils de mesure de cette utilisation comme l'auto-déclaration présentent des limites. Ainsi, nous avons analysé la détection du chromosome Y (c-Y) dans les frottis génitaux des PS qui pourrait constituer un outil de mesure plus fiable.

**Methods:** Des prélèvements vaginaux ont été collectés au screening puis tous les 3 mois pendant un an. Un nombre aléatoire de 165 échantillons ont été envoyés à l'université de Washington pour le test du c-Y. Le kit de quantification d'ADN Quantifiler® Duo a été utilisé pour la détection du c-Y. Nous avons analysé l'auto-déclaration de l'utilisation du préservatif, les IST et la détection de c-Y.

**Results:** Sur 165 écouvillons vaginaux de 132 PS, testés pour la détection du c-Y, 164 ont donné des résultats valides. 35/164 ont été positifs au c-Y. Aucune différence significative entre le screening et la période d'utilisation de la PrEP n'a été notée ( $P > 0.05$  by Fisher Exact Test). Chez 32 PS avec différents prélèvements d'écouvillons, 59,4% étaient toujours négatives ; 9,4% étaient toujours positives ; 3,1% étaient initialement négatives et ensuite positives et 28,1% initialement positives et ensuite négatives. Huit PS dépistées positives au c-Y avaient un résultat positif pour CT et/ou NG sur une visite au moins, Toutes les PS avec des données disponibles et positives au c-Y avaient rapporté l'utilisation constante du condom dans les 7 jours précédant leur visite

**Conclusions and Recommendations:** Le nombre significatif de PS (24.2%) positives au c-Y a montré une utilisation inconsistante du préservatif. La détection du c-Y a été enregistrée tout au long des 12 mois de suivi suggérant une absence de compensation des risques en raison de la PrEP. Les IST (CT/NG) ont été rarement détectées. Toutes les PS qui ont auto-rapporté l'utilisation constante du préservatif ont été aussi enregistrées positives au c-Y. L'auto-déclaration à l'utilisation constante de préservatif présente des limites comme outil de mesure pour les rapports sexuels à risques chez les PS

## **FRPEC173**

### **Generating Demand for PrEP among Adolescent Girls and Young Women Engaging in Transactional Sex, Nairobi, Kenya**

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**Issues:** Although HIV in Kenya is generalized at 5.6% prevalence among the general adult population the epidemic is concentrated among female sex workers, men who have sex with men and fisher folk. Female sex workers in Kenya are considered a priority population that requires urgent interventions to stem HIV epidemic in the country. Jilinde project supported National roll-out of PrEP as an additional strategy for HIV prevention. The project conducted a qualitative survey that indicated that high HIV vulnerability is attributed to inability of young sex workers to negotiate safe sex, coercion from sexual partners, low risk perception, transactional sex with inconsistent condom use and preference for unprotected sex as a show of love.

**Descriptions:** Under JILINDE program, mapping of PEs was done followed PE sensitization on PrEP using the national PrEP module. After an Interpersonal communication (IPC) was conducted, it was noted that there were gaps which needed to be addressed through the ETL (Education through Listening) trainings for the Peer Educators to equip them with skills in adult communication. Since at the Community level is where the iron meets the rubber and quite a number of activities took place to include; Mapping of the Hot spots and partners implementing PrEP, Identification of trainers, identification and profiling of peer educators and integrating PrEP with other HIV interventions. The PEs (Peer Educators) were tasked with reaching the PEs with PrEP messages through one on one sessions, small group discussions, outreaches and social media. The PEs came up with work plans which are very essential in planning for mobilisation prior to the outreaches where got an opportunity to talk to the peers about PrEP and other HIV prevention methods.

**Lessons learned:** The use of PEs made it possible to reach the Adolescent girls and young women engaging in transactional sex because they are part of the network. Additionally, peer education sessions happening in the hotspots, enhanced prep awareness and linkage for PrEP services.

**Next steps:** Capacity building peer educators through having additional trainings which are specific to PrEP, continuous sensitization of the peer educators tailored on the needs of young women engaging in transactional sex enhances awareness creation on PrEP and uptake of PrEP among adolescent girls and young women engaging transactional sex hence reduces their vulnerability to HIV infections and ,STI screening diagnosis and treatment.



## FRPEC174

### Drivers of and Barriers to Interest in PrEP among Young Men in Mpumalanga and KwaZulu-Natal, South Africa

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**Background:** While HIV incidence in South Africa has declined in other groups, incidence among young men has remained flat, with no research on the suitability of PrEP for this population. This study aimed to understand perceptions of PrEP among young men in KwaZulu-Natal and Mpumalanga, South Africa.

**Methods:** We conducted in-depth interviews with purposively recruited men (n=58), analysed thematically. We then administered a quantitative survey with randomly selected men (n=2019), and analysed the data using descriptive and inferential statistics. Eligibility criteria included age (20-34), ethnicity (African), education (high school or below), and circumcision (20% cap on respondents medically circumcised).

**Results:** We found very low awareness of PrEP (12%) among respondents. However, once informed, 62% indicated being likely or very likely to try it.

Most reported inconsistent condom use (57% sometimes, 11% never) and multiple partners (mean=2.4) over the past 12 months yet also feared contracting HIV. They viewed PrEP as a way to have sexual freedom while avoiding HIV. The most common reasons for interest in PrEP were to remain HIV negative (32%) and to be carefree (24%).

While most felt PrEP should be provided free by the government, they indicated willingness to pay an average of ZAR188 (US\$13) per month if this were not the case.

Overall enthusiasm was moderated by psychological, social and practical concerns. A significant proportion said they would want to keep PrEP secret from their partner (39%), friends (44%) and family (41%). Although the need to test for HIV prior to starting PrEP was cited as a concern, only 14% said this would make them less likely to take it. Respondents also indicated concerns about going to the clinic to collect pills (43%), remembering to take a pill every day (50%) and coping with potential side effects (52%).

This population may however experience relatively fewer barriers than other target groups, particularly AGYW. They generally experience less stigma around being sexually active and having multiple partners, and may therefore anticipate less stigma around PrEP use, even ascribing positive connotations in terms of identity and social status.

**Conclusions:** The prevalence of HIV risk behaviours among young South African men, their overall receptiveness to PrEP, and the presence of relatively fewer barriers suggest that this group should be considered as a strategic and legitimate target of PrEP programming.

## FRPEC175

### Early Experience of Pre-exposure Prophylaxis Roll Out in Lusaka, Zambia

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**Issues:** Achieving HIV epidemic control requires scale up of effective HIV treatment and prevention interventions aimed at reducing population-level HIV incidence. In 2018, Zambia adopted Pre-Exposure Prophylaxis (PrEP) as part of the national HIV prevention strategy. The Center for Infectious Disease Research in Zambia (CIDRZ), with support from CDC/PEPFAR, is working with the Ministry of Health to scale up PrEP in Lusaka Province, the area with Zambia's highest HIV prevalence (16.1%). We describe here the early experience with PrEP roll out in Lusaka.

**Descriptions:** In February 2018, we introduced key population (KP) and priority population-friendly services, including PrEP, at 7 CIDRZ-supported facilities in urban Lusaka. We provided PrEP (FTC/TDF) and monthly clinical follow-up within a dedicated KP-friendly space situated in the ART clinic and serving: female sex workers (FSW), men who have sex with men (MSM), transgender women (TGW), and negative partners in sero-discordant couples. We assembled a retrospective cohort of clients who, between February—December 2018, received a negative HIV test and screened positive on a standardized HIV-risk assessment tool. We report here the PrEP prevention cascade at 1, 3, and 6 months.

**Lessons learned:** We enrolled 547 clients on PrEP: 141 (25.8%) of these were KP (34 MSM, 104 FSWs, 3 TGWs) and 406 (74.2 %) sero-discordant couples. 262 (47.9%) were females, of whom 66 (25.2%) were < 25 years and 196 (74.8%) were ≥25 years.

The PrEP retention cascade among the 387 of 547 clients over 6 months of observation time is 35% at 1 month after initiation, 18% at 3 month and 1% at 6 month

**Next steps:** Despite PrEP availability in Lusaka, demand remains low with excessively high loss to follow up. Further research is needed to understand reasons for clients attrition from the PrEP cascade and to develop targeted, evidence-based strategies to improve client engagement, spark demand creation, and improve retention on PrEP amongst key and priority populations.

## FRPEC176

### **Pre-exposure Prophylaxis in Rwanda: Preliminary Results from the First Phase Implementation**

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**Background:** PrEP has been proven to be an effective tool to reduce HIV acquisition among people at substantial risk of HIV infection. The current Rwanda National HIV strategic plan and guidelines recommend PrEP as additional HIV prevention choice for key populations groups. The country adopted phased approach implementation and introduced PrEP in 10 health facilities located in City of Kigali in the first phase. We are reporting on preliminary data of PrEP implementation among female sex workers (FSWs).

**Methods:** We used the cohort of FSWs who are routinely followed in key population program in 10 selected health facilities for the introduction of PrEP. FSWs were eligible for PrEP initiation if (1) they were HIV negative, (2) reported a high risk behavior (inconsistent condom use, history of STIs in the last six months, or active STIs on the day of screening), were willing to be initiated on PrEP, and had creatinine clearance of more than 60ml/min.

**Results:** Between November 2018 to July 2019, 659 FSWs were screened for PrEP eligibility. The median age was 31, and 47% of FSW reported having ever been married. Only 14% of FSW had attended secondary school, and 78% of them reported sex work as the only source of income. Of the 659 FSW who were screened for PrEP eligibility, 626 (95%) were found to be at high risk, but 31 of these (5%) did not perceive themselves to be at high risk of contracting HIV. Only 148 of the 626 high-risk FSW (24%) had previously heard of PrEP, but willingness to take PrEP was high (598/626: 96%). Willingness to initiate PrEP among high-risk FSW who did not perceive themselves to be at high risk was only 42%. After evaluating their baseline creatinine clearance, 565 of the 598 FSW (94%) who were willing to initiate PrEP were eligible for PrEP, and 563 were effectively initiated on PrEP.

**Conclusions and Recommendations:** Despite the low knowledge of PrEP, the acceptability of PrEP was high in the population of FSWs. Implementation's experiences from this first phase will inform the scale up of the program.

## FRPEC177

### Estimating the Costs of PrE-exposure Prophylaxis (PrEP) in Ten Counties of Kenya

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**Background:** Given the compelling evidence behind the effectiveness of pre-exposure prophylaxis (PrEP) to prevent HIV infection, the Government of Kenya endorsed PrEP as an expansion of HIV prevention technology option for those who are at highest risk of infection. However, as the government of Kenya continues to scale up PrEP, there has been very little examination on the cost of oral PrEP among Key Populations (KPs). Jilinde, a Bridge to Scale program, estimated the costs of oral PrEP for KPs using various models of service delivery and geographic regions in Kenya.

**Methods:** A cross-sectional survey was undertaken in ten counties in Kenya. Costing data was collected from 44 facilities consisting of 23 public facilities, 5 private facilities and 16 drop-in centres (DICES). Financial and programmatic data for the period April to September 2017 and October 2017 to March 2018 was collected from financial and asset records and through key informant interviews at the 44 facilities. We estimated the costs associated with PrEP provision using an ingredients-based costing approach which involved identification and costing of all the economic inputs (both direct and indirect) used in PrEP service delivery.

**Results:** The estimated cost of providing PrEP was US\$256 per person per year, ranging from US\$215 at health centres to US\$283 at dispensaries. DICES, which served about two-thirds of the client volume at surveyed sites, had unit cost US\$ 276. By client population, the unit cost was highest for MSM (US\$355), while it was lowest for FSW (US\$259). The unit cost for AGYW was US\$323 per person year. The largest percentage of costs were attributable to personnel (53%), followed by the cost of Truvada (28%) and management and supervision (7%). The cost was highest in the Lake cluster (US\$272) and lowest in Nairobi cluster (US\$267). The incremental weighted cost of 12 months PrEP in public sites were estimated to be \$ 39.58 (\$3.30 per month).

**Conclusions and Recommendations:** This study has provided evidence of the unit cost of a PrEP program from a service delivery perspective essential for the Government of Kenya in planning for the further scale-up of PrEP nationally.

## **FRPEC178**

### **How Do We Roll Out PrEP for Adolescent Girls and Young Women (AGYW)? Healthcare Providers Perspectives on Challenges and Facilitators to PrEP Provision to AGYW in South Africa**

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**Background:** Healthcare providers are key to ensuring the successful delivery of PrEP to AGYW and little is known about their attitudes around the introduction of PrEP as part of an integrated package of services to AGYW. This paper reports on provider's perspectives on training needs, barriers, and facilitators to PrEP delivery and provision at Primary Healthcare facilities.

**Methods:** Data were collected in the implementation science study exploring the introduction of PrEP into Comprehensive Sexual and Reproductive Health Services for Adolescent Girls and Young Women (AGYW) in South Africa. In-depth-interviews (IDI's) and socio-demographic surveys were conducted with HCP working at Primary healthcare facilities between February 2019 - May 2019 in Gauteng and Eastern Cape at seven urban, semi-rural and peri-urban facilities. IDCs were transcribed, analysed thematically, and descriptive statistics were conducted on demographic data.

**Results:** Professional enrolled, registered nurses, doctors, counsellors and community workers were interviewed. In total 38 HCP's participated in the interviews. Most HCP were 47years old (min 26 and max 63 years). Many reported providing more than one service e.g. STI screening and treatment (70, 83%), family planning (62, 5%), HCT s (66, 67%) and ARV services (58, 33%). Most providers interviewed had received training on PrEP (79,17%) from National Department of Health and requested more information on how to integrate PrEP into SRH services. For many their primary source of information on PrEP was from on-the-job training (66, 67%). Many expressed a need for support and the desire to access reliable information on PrEP. Other barriers included scarcity of Nurse initiated management of antiretroviral treatment (NIMART) trained nurses. HCPs were unsure how to best support AGYW to adhere to PrEP, "I think it will be adherence because the youth are not used to taking tablets". Finally, logistical concerns around attracting youth and providing services at youth friendly times were noted, "They will be wanting to come during weekend or after hours and we health providers are not there."

**Conclusions and Recommendations:** The preliminary findings indicate the need to capacitate and mentor HCP on an ongoing basis to implement PrEP services successfully. For PrEP delivery to AGYW to be successful facilities need to have dedicated times for youth, a fast track youth and make pill collection easier and less burdensome.

## FRPEC180

### What Do Kenyans Spend to Receive PrEP Services?

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**Background:** In December 2015, the government of Kenya recommended offering pre-exposure prophylaxis (PrEP) as a prevention option to HIV-negative individuals at substantial high risk of infection. However, while recent evidence shows that the use of PrEP with a combination of TDF/FTC is highly efficacious and effective at lowering the risk of HIV infection in key populations (KPs), information on the economic barriers borne by KPs remain largely unknown. This study helps to better understand what economic barriers might exist to those receiving PrEP services at different geographical settings in Kenya.

**Methods:** PrEP client exit interviews were conducted in 10 counties with a representative sample of 1890 HIV-negative clients. The majority of clients were interviewed during their first visit or second visit for refills after a written consent to participate in the survey. We estimated expenditures incurred by PrEP clients across different spending categories, time spent travelling to and from the facility, utilisation of PrEP services, lost income and satisfaction about the services received.

**Results:** Of the total number of respondents interviewed, the mean age was 26 years, varying from 19 years to 27 years. Average monthly income was higher among men who have sex with men (MSM; US\$ 276.41) compared to that of female sex workers (FSW; US\$ 253.40) and adolescent girls and young women (AGYW; US\$ 86.15). PrEP-related expenditures for receiving PrEP services relative to monthly income varied from 1% among AGYW, 0.2% and 0.4% among FSW and MSM respectively. Total time costs (in hours) were: 0.74 hours (AGYW), 0.56 hours (FSW) and 1.3 hours (MSM) for the initial visit. FSW spent US\$ 0.47 on transport, while MSM and AGYW spent on average of US\$ 1.05 and US\$ 0.78 respectively. Overall, 99% of the clients said they were satisfied with the services received.

**Conclusions and Recommendations:** Clients receiving free care for PrEP services incur negligible private costs, which suggests that access to PrEP services may not substantially impose a financial burden on the clients. Owing to low income, especially among the AGYW, subsidization of transport costs and drug refill points closer to the residential places could potentially improve continuation and adherence.

**Keywords:** Pre-exposure prophylaxis, client costs, quality of services

## FRPEC181

### Rôle des Pairs-éducateurs dans l'Accompagnement Communautaire à la PrEP auprès d'HSH en Afrique de l'Ouest (CohMSM-PrEP ANRS 17301 - Expertise France)

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**Contexte:** Les pairs-éducateurs (PE) - personnes recrutées par les structures de santé au sein des communautés concernées - jouent un rôle clé dans la mise en œuvre des programmes ou des recherches en lien avec le VIH auprès des populations clés. Intervenants à différentes étapes du projet, ils assurent la continuité et le bon déroulement pour les personnes concernées mais leur rôle reste finalement peu connu. Dans le cadre d'un projet de recherche d'implémentation de la PrEP en Afrique de l'Ouest auprès des HSH (CohMSM-PrEP), l'objectif de cette étude est de décrire les activités des PE.

**Méthodologie:** Depuis Novembre 2017, 540 personnes ont été incluses, une cohorte interventionnelle qui évalue la faisabilité et l'acceptabilité de la PrEP pour les HSH de 4 cliniques communautaires d'Afrique de l'Ouest (Burkina-Faso, Côte d'Ivoire, Mali et Togo). Dans le cadre de cette offre, les PE du projet proposent un accompagnement personnalisé aux participants (entretiens individuels, groupes de paroles, distribution de préservatifs, etc). Les données ont été extraites du questionnaire socio-comportemental administré 12 mois après la première prescription de PrEP chez les participants.

**Résultats:** Au 5 juin 2019, 234 participants ont répondu au questionnaire. Après 12 mois de suivi et avec un minimum de 7 rencontres formalisées avec les PE, la satisfaction médiane des PE déclarée par les participants atteignait 9 sur 10 [IQR 8-10]. Durant cette première année de suivi, 40 % (n=94) des participants sont venus au moins une fois au centre de prise en charge en dehors d'un rendez-vous programmé et 37 % (n=86) ont contacté le PE au moins une fois au cours de l'année écoulée. 12 % des répondants (n= 28) les ont contactés très régulièrement (plus d'une fois par mois). En dehors des informations sur le VIH, les IST et la PrEP, abordés dans la grande majorité des entretiens individuels, les thématiques souvent abordées étaient l'orientation sexuelle et l'identité de genre (13 %, n=31), les discriminations et violences liées à l'orientation sexuelle (9 %, n=21) ou encore la consommation d'alcool et de drogues (4 %, n=10).

**Conclusion:** Le rôle des PE ne se limite pas aux entretiens et animations de groupes prévus; ils assurent, par leur proximité et leur disponibilité avec les participants, un véritable soutien sur des thématiques allant bien au-delà de l'accompagnement communautaire à la PrEP et permettant à ces derniers une prise en charge optimale.

## FRPEC182

### Comparing Pre-exposure Prophylaxis (PrEP) Discontinuation Between Peer and Non-peer Referred Adolescent Girls and Young Women from Migori County, Kenya

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**Background:** Globally, and in sub-Saharan Africa, young people (15-24 years) contribute substantially to new HIV infections. Adolescent girls and young women (AGYW) are unduly affected; suffer unique barriers to accessing prevention methods and high discontinuation. Evidence from user-centered studies identify that peer-led mobilization can abrogate low uptake, though its effect on discontinuation is unknown. Jilinde, a large-scale PrEP project funded by Bill & Melinda Gates Foundation in Kenya, targets AGYW and utilizes peer mobilizers to drive PrEP uptake in Migori County. We investigated PrEP discontinuation comparing peer and non-peer referred AGYW on PrEP in Jilinde.

**Methods:** We analyzed routine data collected from 13 public facilities by providers using a national PrEP tool during clinic visits between May 2017 and June 2019. Data were entered to a secure database and de-identified. AGYW who did not return for scheduled visits were treated as discontinued. We conducted bivariate analysis comparing discontinuation between peer and non-peer referred AGYW at months 1 and 3. We estimated a regression model to control for demographic variables and behaviours.

**Results:** During the period, 1,797 AGYW initiated PrEP. Of these 1,345 (75%) and 1079 (60%) were due for month 1 and 3 visits respectively. Mean age was 19.6 years, 51.6% mobilized through peers, and 33% married. Most (67.7%) and nearly all (94.5%) of AGYW due for month 1 and 3 visits respectively discontinued. PrEP discontinuation was higher among AGYW not mobilized by peers (69.7% vs 65.94%) at month 1 ( $p=0.128$ ) and month 3 (95.9% versus 93.2%) ( $p=0.051$ ). Month 1 discontinuation was lower among AGYW engaging in sex with partners with known HIV status (OR 0.64(0.42-0.96), ( $p=0.031$ ) and on family planning (FP) (OR 0.71(0.53-0.93), ( $p=0.014$ ), and higher among AGYW in public facilities (OR 3.05(2.38-3.92), ( $p < 0.001$ ). Month 3 discontinuation was lower among AGYW on FP (OR 0.55(0.30-0.98), ( $p=0.044$ ) but higher among AGYW in public facilities (OR 5.03(2.88-8.77), ( $p < 0.001$ ). Controlled for partners' HIV status, FP access and type of facility, peer mobilization did not predict discontinuation at months 1 and 3.

**Conclusions and Recommendations:** In Jilinde, peer mobilization contributed substantially to PrEP uptake. Peer mobilization was not associated with discontinuation, but facility type and lack of FP access did. Peer-led mobilization should be optimized to support AGYW to access services beyond PrEP.



## FRPEC183

### Effectiveness of Promotional Materials Developed through Human Centered Design (HCD); A Case of Glow in the Dark Bag among Female Sex Worker (FSW) Peer Educators (PEs) in Kenya

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**Issues:** Kenya launched national PrEP Scale up in May 2017 with progressive but slower than expected uptake mirroring PrEP demonstration projects and early national scale up efforts in sub-Saharan Africa. Consequently, there was need for novel demand creation strategies to address challenges with PrEP uptake. This abstract describes effectiveness of 'Glow in the dark' bag in generating demand for PrEP enrolment in facilities offering Oral PrEP through PrEP promotion. The *Glow in the Dark bag* was developed through Human centered design (HCD) process, which entailed ethnographic immersion research. Insights from the study were unpacked through a design sprint workshop and used to develop prototypes for PrEP promotion scale up.

**Descriptions:** The tote bag was branded with the words "Ask me About PrEP" printed with ink that glows in the dark intended to create a "pull effect" from which PrEP conversations would begin and enrolment increase through referrals. The bag was pre-tested then piloted for 8 weeks with 40 female sex worker (FSW) PEs from June 2018. Each PE was issued the *bag* containing information education and communication (IEC) materials for HIV, qualitative evaluation of the pilot through 2 focus group discussions (FGDs) with 20 FSWs and 4 in-depth interviews (IDIs) with 4 FSW PEs, purposively sampled done. Effectiveness of the *bag* was assessed by evaluating whether it helped: identify PEs at hotspots, drew attention to PEs, stimulated conversations on PrEP, and ultimately increase referral of potential PrEP clients to facilities offering PrEP.

**Lessons learned:** The bag attracted FSWs to PEs, sparking conversations, distinguished PEs as credible sources of PrEP Information PrEP and reduced time spent in building rapport with FSWs. Accepted among FSW, it sparked PrEP conversation making referrals for PrEP initiation easy besides motivating some FSWs to become PEs. Ultimately, PEs observed an increased number of FSWs seeking guidance and enrolling on PrEP during the 8-week pilot period.

**Next steps:** By attracting FSWs to PEs, sparking conversations on PrEP, helping identify PEs among FSWs, and ultimately contributing to increased PrEP uptake, the *bag* proved to be an effective promotional material relevant for large scale PrEP mobilization. Recommendations from the assessment was reviewed and the bag scaled up to other Key Population peer educators in the project in a different design.

## FRPEC184

### Healthcare Service Providers' Knowledge of and Willingness to Prescribe Pre-exposure Prophylaxis (PrEP) to Key Populations in Ghana

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**Background:** PrEP is a preventive strategy for HIV infection among high risk populations. We explored healthcare service provider knowledge about PrEP and their willingness to prescribe PrEP to key populations (KPs) in Ghana as a formative assessment of PrEP introduction in two regions of Ghana (Greater Accra and Brong Ahafo).

**Methods:** Data are from a cross sectional survey administered to 409 healthcare professionals (doctors, physician assistants, nurses, counselors, pharmacist, dispensing technicians, case managers, and peer educators) from private and public health facilities sampled across the regions using a multi-stage sampling procedure. Health facilities were stratified by type and by ownership (public or private) before sampling. Quota sampling was used in selecting service providers for interview. An index measure of knowledge about PrEP was computed and a logistic regression model was fitted with attitudes to prescribe PrEP as the outcome after accounting for selected socio-demographic characteristics of providers

**Results:** We interviewed only health providers, finding no statistically significant association between type of provider and ever having heard about PrEP before the survey. Pharmacists and dispensing technicians (18%) knew the most about PrEP, with overall awareness at 13%. 84% of providers indicated that PrEP should be available to KPs. However, knowing about PrEP before the survey was not a predictor of provider attitudes toward PrEP for KPs. Case managers and peer educators, who are auxiliary health staff providing support through task shifting, are nearly four times more likely (OR) 3.7142 (P=0.018) to support PrEP being made available to KPs. Provider age and number of years in the profession have a direct relationship with providers' support in making PrEP available to KPs.

**Conclusions and Recommendations:** Prior knowledge about PrEP is not a significant predictor of provider attitude toward prescribing PrEP to most at risk populations. The overwhelming support by service providers lends credence to the need to introduce PrEP in Ghana.

## FRPEC185

### Do Policy Makers Support the Introduction of PrEP for Key Populations in Ghana? Findings from a Qualitative Study

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**Background:** Key populations (KPs) such as people who inject drugs (PWID), men who have sex with men (MSM), female sex workers (FSW) and their regular partners contribute more than a fourth (27.5%) of new HIV infection in Ghana. Oral pre-exposure prophylaxis (PrEP) can substantially reduce HIV acquisition among this group. While the available research indicates the willingness of KPs to take PrEP, Ghana is yet to adopt PrEP delivery as part of the routine HIV combination prevention services. We examined the position of policymakers in the health and HIV sector on the introduction of PrEP for KPs.

**Methods:** From September 2017-October 2017, we purposively selected and conducted a total of 20 key informant interviews (KIIs), with national, regional and district level policymakers. Eleven in Brong-Ahafo region representing the northern sector and nine in Greater Accra region representing the southern sector. Thematic content analysis was used to arrive at the results after verbatim transcripts were coded using both inductive and deductive coding techniques.

**Results:** Policymakers acknowledged that KPs were at high risk for HIV and therefore expressed strong support for introducing PrEP as a strategy to mitigate HIV infections among KPs. They also called for PrEP to be expanded to cover not just KPs but all populations at elevated risk of HIV acquisition, such as adolescent girls and young women. However, there were pockets of resistance to the introduction of PrEP. Key concerns about PrEP introduction include behavior disinhibition and non-adherence and stigma. Some policy makers who opposed the introduction of PrEP were also concerned about the long-term financial implications for introducing PrEP and making it affordable to those who need it. They feared that if PrEP is introduced in Ghana, it will shift resources from what they consider as their priority, such as preventing mother-to child transmission.

**Conclusions and Recommendations:** Policymakers recognize the value of PrEP but have concerns about disinhibition, non-adherence, and cost. Therefore, a range of strategies are needed to address their concerns including: advocacy and engagement with policymakers to mitigate any underlying stigma they may have against KPs and to allay their fears about potential misuse; and a demonstration project with KPs to show its effectiveness in a real world setting, with regular updates on the project provided to policymakers.

## FRPEC186

### **PrEP Is Not for Me: A Programmatic Intervention to Demystify PrEP Use among Male Sex Workers**

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**Issues:** Implementation of pre-exposure prophylaxis (PrEP) with male sex workers faced potential challenges because male sex workers believed PrEP was not for them and this was borne out of their low risk perception, fear of side effects, burden of daily medication, myths and misconceptions about PrEP including the perception that people will see them as being HIV+ due to the daily intake of the PrEP medications. HOYMAS employed programmatic strategies that quickly turned around this challenge thus ensuring that cumulatively 720 male sex workers registered for PrEP.

**Descriptions:** With the help of our partners we created communication and campaign strategies to demystify the many issues about PrEP among male sex workers. An ambitious awareness creation programmatic intervention was also implemented beginning 2017 and is still being undertaken. The awareness creation approaches included the use of social media where attractive posters and targeted messaging, intimate image of male couples declaring relationship improvement and increased pleasure from use of PrEP, Short Message Services and targeted WhatsApp groups to put out information about what PrEP is and its effectiveness. We also invited influential male sex workers and who community members look up to act as brand influencers and talk about PrEP. We also developed Information, Education and Communication materials with various messages, generated in digital and print media, and held discussions between PrEP ambassadors and male sex workers during encounter group sessions at the lounge and other conversations were held at community level at the hot spots. In total, 3,200 male sex workers have been reached with information about PrEP.

**Lessons learned:** Since 2018 July, 975 male sex workers have been enrolled and are actively using PrEP. There is also greater adherence among this group members as innovative communication strategies has ensured that non adherence has been eliminated. There is also an increasing number of male sex workers proudly taking PrEP and openly talking about its positive effects.

**Next steps:** With targeted messaging and perception influencing approaches male sex workers dramatically embrace PrEP use and become the champions influencing others to start using PrEP. Engaging the concerned male sex workers and reaching them at the community level with targeted messages breaks down the resistance and guarantee increased uptake.

## FRPEC187

### **Undetectable=Untransmittable: The Unprecedented Contribution of Effective HIV Treatment as TASP among Male Sex Workers in Nairobi**

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**Issues:** HOYMAS clinic opened on April 2015 providing comprehensive HIV prevention interventions for male sex workers and men having sex with other men. Between April 2015 and December 2016, up to 285 male sex workers out of 1000 male sex who had accessed services at the clinic received HIV positive results. Our HIV treatment approaches focused on encouraging 100 percent adherence to treatment. The viral load of the 285 male sex workers has been monitored since enrollment into treatment and 90% of them consistently have undetectable viral loads. 75 percent of them who have HIV negative permanent partners have also reported that their partners still remain HIV negative. There is generally, reducing new HIV infections among male sex worker community based on data in our community led clinic.

**Descriptions:** The approaches to ensure 100 percent adherence to HIV treatment among male sex workers affiliated to our community led clinic were conceived with the intention of treatment as prevention against HIV transmission. We used the innovative peer navigators' approach which ensured that treatment defaulters were traced from the community level. We also used the support groups approach to provide male sex workers on HIV treatment with opportunities for monthly meetings with their peers to enable them discuss strategies for ensuring they adhere to treatment. We also used information technology methods such as WhatsApp groups and SMS to ensure those on treatment have open discussion about adherence.

**Lessons learned:** Our adherence to treatment approaches ensured sustained suppression of HIV virus thus ensuring improved prevention against HIV transmission. There was also 100 percent zero HIV transmissions among male sex workers in long term serodifferent couples relationships. HIV male sex workers who also engaged in condomless and PrEP less sex with their HIV negative partners on more than one occasion did not transmit HIV virus to their partners.

**Next steps:** There is need to improve efforts to encourage male sex workers living with HIV and who have negative partners to make well informed decisions regarding their sexual activities including consistent and correct condom use and asking them to encourage their HIV negative partners to use and adhere to PrEP because these are evidence proven methods for preventing HIV transmission.

## **FRPEC188**

### **PrEP Uptake among HIV Negative Male Sex Workers in Nairobi County? What Are the Motivations and Barriers to PrEP Uptake?**

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**Issues:** Male sex workers have higher HIV incidence and prevalence when compared with the men who generally have sex with other men without engaging in sex work, despite similar risk profiles. Improved access to new prevention technologies such as Pre-Exposure Prophylaxis (PrEP) has been targeted at male sex workers to address these inequalities. Community level conversations between male sex workers and HOYMAS staff including PrEP ambassadors and peer educators aimed at understanding the motivations and barriers of male sex workers to PrEP uptake and usage.

**Descriptions:** HOYMAS organizes periodic conversations between MSWs who have been registered for and are using PrEP and peer educators on why they are motivated to use PrEP and those who have declined to be registered and use PrEP on why they would not use PrEP as a HIV prevention technology. So far, there have been conversations with about 450 male sex workers who accepted to be registered and use PrEP. There have been also conversations with 180 male sex workers who declined to register to use PrEP. The emerging motivating factors for PrEP uptake and barriers to PrEP uptake were organized and analysed using a thematic framework analysis.

**Lessons learned:** The conversations about motivations for PrEP uptake revealed that higher HIV risk perception due to a large network of sexual partners, the motivation for improved intimacy arising from condomless sex, the fact that PrEP is accessed from HOYMAS's community led clinic, and increased understanding of how PrEP use was important in reducing risk to acquiring HIV infection were the greatest motivations for registering to and use PrEP. Conversations with male sex workers who declined PrEP use revealed that they had not been convinced enough about PrEP's effectiveness in minimizing new infections in cases of consistent and correct condom use, concerns regarding regular adherence to PrEP, the side effects of long term use of PrEP, low HIV risk perception because of condom and lubricant usage, and the notion that PrEP use would tempt them to abandon condom and lubricant emerged as the greatest barriers to PrEP uptake.

**Next steps:** Community led implementation can help identify appropriate communication strategies to effectively put out information to demonstrate how PrEP is an effective, safe and comprehensive HIV risk management approach.

## FRPEC189

### Six-Year Follow-up Observation of HIV Transmission among Serodifferent Couples in Abidjan from 2012 to 2017, Côte d'Ivoire

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**Background:** Human immunodeficiency virus (HIV) infection remains a global pandemic. The primary driver of HIV incidence is sexual transmission between serodifferent individuals. However, the demonstrated effectiveness of antiretroviral therapy (ART) to prevent HIV transmission, known as treatment as prevention and of pre-exposure prophylaxis, few data in our context in Abidjan are available. The aim of the present study was to estimate the rate of within-couple HIV transmission followed-up in the Infectious Disease Department (IDD) at Treichville Academic Hospital (Côte d'Ivoire).

**Methods:** The prospective, observational study was conducted during January 2012 to December 2017 at IDD and enrolled 117 HIV serodifferent couples (HIV-positive partner taking suppressive ART). A annual follow-up included viral load control of the HIV infected partner, condom use, and the spouse's HIV test control every six months were performed. Our primary endpoint was the Risk of within-couple HIV transmission to the HIV-negative partner.

**Results:** A total of 117 couples were enrolled during our study period, of whom 102 were followed up. In our index population, the median age was 41 years [IQR 35-46 years]. One-third of the couples (35.90%) had been in a relationship for more than 5 years. Among those who always (still) had sex, 51.28% did not use condom. Almost half of the patients (48.72%) were already on antiretroviral therapy at baseline with a median duration of 4.70 years [IQR 1.83-7.06]. At follow-up, the median CD4 count was 397 [278-580] cells/mm<sup>3</sup>. The median plasma viral load was 0.1 log<sub>10</sub> copies/ml with more than half of the patients (58.82%) having less than 50 copies/ml. However, 18% had a plasma viral load greater than 1000 copies/ml. Our couples were followed up for a median duration of 4.19 years [2.86-5.21]. During follow-up, one out of 102 discordant couples was found to have seroconverted during the follow-up (incidence rate, 0.243 per 100 couple-years; 95% confidence interval, 0.232-0.248).

**Conclusions and Recommendations:** Among serodifferent couples in which the HIV-positive partner was using suppressive ART, only one documented case of within-couple HIV transmission (upper 95% confidence limit, 0.243/100 couple-years of follow-up). Additional longer-term follow-up is necessary to provide more precise estimates of risk in our context particular identifying the main risk factor.

## FRPEC190

### Impact of the WHO's "Test and Start" Guideline Implementation on Reaching WHO/UNAIDS's 90-90-90 Targets in Namibia

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**Background:** To achieve the WHO/UNAIDS's 90-90-90 HIV-treatment targets, Namibia transitioned nationally to test and start (TnS) guidelines in April 2017. This study aimed to help the Namibian government understand the impact of TnS implementation on key anti-retroviral treatment (ART) outcomes at selected sites, and how this transition impacts progress toward 90-90-90.

**Methods:** We collected clinical records from two cohorts of ART patients in 10 high- and medium-volume facilities in 6 northern Namibia districts. Each cohort (pre-implementation: clients on ART or pre-ART 12 months before April 2017 (TnS start date); post-implementation: ART or pre-ART clients after "test and start") contains 12-month data on clinical visits, appointments, and viral load (VL) results. We also measured patients' wait time using exit interviews with 300 randomly-selected patients (per round). We compared ART outcomes of the two cohorts: Loss to follow up (LTFU= being lost from the care system for more than 90 days), viral suppression (VL < 1,000 copies/ml), and wait time using unadjusted and adjusted analyses.

**Results:** The pre-implementation (n=1218) and post-implementation (n=1201) cohorts were comparable in age (40 years old), and gender (66% female).

Post-implementation patients were more likely to achieve viral suppression (96% vs. 92%;  $p < 0.01$ ). LTFU was lower among pre-implementation patients (9% vs. 15%;  $p < 0.05$ ). However, there was no difference in LTFU among long-term patients on ART for at least 15 months (9% vs. 11%; non-significant). The average number of annual ART patient visits decreased significantly from 3.4 to 2.6 times ( $p < 0.01$ ). Median wait time decreased significantly (100 minutes versus 75 minutes;  $p < 0.01$ ). Pre- and post-implementation differences remain statistically significant in adjusted analyses (multiple logistic) for two outcomes: "viral suppression" and "wait time".

**Conclusions and Recommendations:** The findings indicate positive impact of the TnS implementation on viral suppression. Additionally, by April 2018, Namibia seems to have reached the WHO's 90-90-90 targets. While TnS may have expanded patient volume, service decentralization and changes in ART visit requirements may have contributed to reduction of patient wait time. We recommend careful monitoring of patients initiating ART on the day of HIV diagnosis as a strategy to reduce LTFU and to reach the next-level "95-95-95" targets.



## **FRPEC191**

### **The Role of Saliva in the Inhibition of HIV-1**

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**Background:** In 2017, 36.7 million people worldwide were living with Human Immunodeficiency Virus (HIV) and of that total, 1.8 million people were new infections. Sub-Saharan Africa was recognised as the most afflicted regions worldwide accounting for 26 million people, 68%, living with HIV. The difficulty in fighting this epidemic has raised the urgent need for research exploring ways in which HIV transmission can be curbed worldwide.

**Methods:** Saliva was collected and stirred overnight in 6M guanidine hydrochloride with 10mM Na<sub>2</sub>HPO<sub>4</sub>, 10mM EDTA, 1mM PMSF and 5mM NEM. Salivary mucins (MUC5B and MUC7) were purified using caesium chloride ultracentrifugation and separated on a Sepharose CL-4B column. The resultant fractions were dialysed and freeze dried. Slot blots were used to determine the identity of the void volume (Vo) fractions and the included volume (Vi) fractions which were identified as MUC5B and MUC7 respectively. The Vo and Vi fractions were subjected to 4-20% sodium dodecyl sulphate polyacrylamide gel (SDS-PAGE) to determine the size and mucin concentration. This was then followed by a neutralisation assay which uses HIV-1 env pseudo virus (DU422.1 and YU2 subtype C and subtype B respectively) and a luciferase reporter gene involving modified TZM-bl/JC cells was used to test the inhibitory activity of the test samples.

**Results:** Comparison of the anti-HIV activity of crude saliva, MUC5B and MUC7 against the DU422 virus showed that both crude and purified saliva indeed inhibits the infection of the DU422.1 pseudo-virus strain to TZM-bl/JC cells. A significant difference in the inhibition of the YU2 virus was detected between MUC7 and crude saliva. In addition, reduced and digested salivary fragments inhibited both viruses suggesting the possibility that even when the gel forming properties of mucins are compromised, mucins still retain their inhibitory activity. De-glycosylated MUC7 displayed minimal inhibition against the YU2 and DU422 virus suggesting that oligosaccharides are important for maximal inhibition.

**Conclusions and Recommendations:** In conclusion, the results of this study suggest that MUC5B can be harnessed and used as a core component of a microbicide which can be used to prevent HIV transmission. Its extensive glycosylation compared to MUC7 makes it a better candidate for this anti-HIV-1 inhibitory activity. This is a tool that can be used by woman to empower themselves.

## FRPEC192

### **Changing the Paradigm with Facebook Messenger Chatbots in Behavioral Change Communication for STD and HIV Prevention Targeting the Youth, a Case Study of the Medical Concierge Group, Uganda**

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**Issues:** Traditional approaches in cascading HIV and STD prevention information require mobilization, face-to-face sessions which are resource intensive and time consuming. This leaves out the youth who often prefer flexible, instant and private approaches to seeking health services. Leveraging the ubiquity of mobile phones and increased internet penetration at 52.3% and 40.3% respectively, The Medical Concierge Group is using Facebook messenger chatbots to reach the youth in Uganda with HIV and STD prevention messages.

**Descriptions:** The Messenger chatbot was set up in June 2017 as a social media application for delivering periodical health information to its clients. Popularization of the chatbot among the youth is done through social media, flyers and short video demos.

Users freely enroll to receive content on HIV and STD prevention by sending in a keyword; e.g. 'HIV' via their messenger inbox to the Chatbot social media application and start to get periodic messages via their private messenger inbox.

Different predetermined keywords initiate the chat and the Messenger Chatbot responds with a welcome message and Language menu for the user to select their preference. The Chatbot, following a weekly schedule of two messages per week, automatically sends curated messages on HIV and STDs.

**Lessons learned:** From June to December 2017, the chatbot was used by 1,053 subscribers of which 69% are males of median age 18 to 34 years. There was also a noticeable monthly increase in numbers health inquiries being handled via the platform from 11 to 256.

The chatbot messages also triggered unsolicited inquiries from users and mainly comprised myths and misconception on transmission (38%). Other inquiries were on medical male circumcision for HIV and STD prevention (20%), condom use for HIV and STD prevention (15%), HIV and STD screening service point location (18%) and Post Exposure Prophylaxis for HIV (9%).

**Next steps:** The Facebook Messenger chatbot widely adopted and reached a large target audience of youth. This approach did not only equip the youth with knowledge on HIV and STD prevention, but also stimulated them to make unsolicited inquiries. Integrating chatbots into public health behavioral change communications and programs of HIV/AIDS prevention alongside face-to-face approaches has the potential to contribute significantly to the achievement of desired STD/HIV prevention goals.

## **FRPEC193**

### **La eSanté pour Faciliter l'Accès des Jeunes aux Services de Conseils, Dépistage et de Prise en Charge des IST: Cas de l'Application eCentre Convivial au Togo**

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**Questions:** Au Togo, l'existence de 35 centres conviviaux pour jeunes est une stratégie de promotion des actions concernant la santé des jeunes et adolescents. (Etude UNFPA Togo, 2013). Les adolescents expriment l'envie de bénéficier d'une éducation sexuelle et d'avoir un répondant avec qui parler des problèmes sexuels, mais dans le respect de la confidentialité (Vodiena G., et al, 2012, p. 403- 415). Comment améliorer la santé des jeunes grâce à l'émergence des Technologie de l'Information et de la Communication? C'est ce que tente d'offrir, au Togo, l'application mobile eCentre Convivial.

**Méthodologie:** L'association des Volontaires pour la promotion des Jeunes (AV-Jeunes) a développé avec l'appui de l'UNFPA/Togo et du Fonds Mondial une application mobile et web en eSanté afin d'améliorer l'accès des jeunes et adolescents aux services d'information et de soins en matière des IST/VIH. Deux consultants nationaux ont été recrutés pour cartographier 46 centres conviviaux et formations sanitaires publiques qui sont ensuite relié à une application mobile dénommé eCentre Convivial. Les jeunes sont ensuite sensibilisé, grâce à sensibilisation porte à porte, en milieu scolaire ou sur les réseaux sociaux, pour consultation en ligne. A la suite de la consultation en ligne, les jeunes sont référés grâce à leur position géographique vers une formation sanitaires la plus proche. Après la consultation, ils reçoivent leurs ordonnances en ligne et d'un suivi personnalisé.

**Leçons Apprises:** Au bout de 6 mois de phase pilote, 317 jeunes de 15-24 ans dont 65% de jeunes filles se sont servis de l'application pour se rendre vers un centre de santé, parmi lesquels, 76 jeunes ont eu des discussions instantanées avec des téléconseillers; 30% ont été enregistrés pour des douleurs abdominales basses ; 25% pour des pertes vaginales et urétrales ; tandis que 20% pour des raisons de dépistage du VIH ; 15% pour des douleurs lors des rapports sexuels et 10% pour des problèmes de menstruation.

**Prochaines Étapes:** Plaidoyer pour l'offre de services adaptés gratuits aux jeunes et adolescents dans les formations sanitaires

## **FRPEC194**

### **Mobile Health Approaches with Facility-based Care to Improve Access and Adherence to Pre-exposure Prophylaxis (PrEP) in Lango Region, Uganda**

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**Issues:** Pre-Exposure Prophylaxis (PrEP) as a biomedical HIV prevention modality has been proven to be effective though uptake has remained suboptimal in Uganda with only about 11,500 PrEP users countrywide. Factors like stigma, lack of credible information, lack of service points, and misconceptions about PrEP have been documented to be the drivers of this trend. Mobile Health (mHealth) offers a feasible way to provide remote information support, education and coordination of healthcare. We share our experience of mHealth support for PrEP roll out in the Lango Region of Uganda through the Regional Health Integration to Enhance Services (RHITES) project supported by USAID.

**Descriptions:** The RHITES project implements PrEP in 2 districts (Lira and Dokolo) with beneficiaries receiving an mHealth package including 24/7 access to doctors via toll free voice line, SMS reminders on facility appointments and access to health content on PrEP use, benefits and side effects. We reviewed electronic medical records and conducted key informant interviews with tele-health providers supporting PrEP clients. Demographic information including age, gender, number of clients in PrEP was analyzed. Open-ended interviewer administered questionnaire was used to evaluate the mHealth package for PrEP clients. Information on adherence and honoring facility appointments was also assessed.

**Lessons learned:** From October 2018 to June 2019 a total of 190 clients (52.6% males and 47.4% females) with a median age of 33 years. The at risk populations included; commercial sex workers (23%), clients of commercial sex workers (10%), discordant couples (60%), and migrant workers (7%) were consented for the mHealth PrEP package. 60% of those under mhealth follow up honor facility appointments, the highest (90%) being among discordant couples, this is higher compared to the 40% reported by MARPI. Health inquiries from the mHealth PrEP beneficiaries cut across various categories including; how to use PrEP (55%), side effects (32%) and myths and misconceptions (13%).

**Next steps:** Telehealth has potential for complementing efforts for PrEP roll out through sensitization and credible consultation using tools like SMS and voice calls. Large scale randomized trials and other program experiences are required to provide more evidence for such platforms to be recommended for large scale deployment.

## FRPEC195

### Impact of a Mobile Phone-based Sexual and Reproductive Health Intervention on Unintended Pregnancy and Contraceptive Use among Female Sex Workers in Mombasa, Kenya

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**Background:** Female sex workers (FSWs) in sub-Saharan Africa experience high rates of HIV and unintended pregnancy, but prevention programs tend to focus on HIV. The "WHISPER or SHOUT" cluster-randomised controlled trial was developed to test two parallel health promotion interventions using SMS to prevent unintended pregnancy (WHISPER arm), and to reduce anaemia (SHOUT arm; control group), among FSWs in Mombasa.

**Methods:** The WHISPER intervention consisted of several SMS per week for 12 months, promoting contraceptive use and related health behaviours, including HIV prevention. Each intervention arm constituted an equal-attention control group for the other. Sex work venues (clusters) in were randomly sampled with a probability proportionate to venue size. At selected clusters, FSWs aged 16-35 years, who owned a mobile phone and were not pregnant were enrolled. Structured questionnaires and pregnancy tests were administered at baseline, and after 6 and 12 months. Discrete-time survival models compared unintended pregnancy incidence (primary outcome) between arms. Secondary outcomes included contraceptive knowledge, dual method use (consistent condom use with all partners alongside an effective non-barrier contraceptive) and long-acting reversible contraceptive (LARC) use.

**Results:** Ninety-three sex work venues (clusters) were randomly sampled, and 882 FSWs (451 WHISPER and 431 SHOUT) enrolled. Incidence of unintended pregnancy was 15.09 per 100 person-years, with no difference between the two groups (hazard ratio:0.98, 95%CI:0.69-1.39, p=0.894). The WHISPER intervention improved knowledge over time (likelihood ratio test (LR)=14.43, p< 0.001) and dual method use (LR=6.47, p=0.039). The effect on condom use differed by partner type, with a positive impact on consistent condom use with clients, but no impact on use with boyfriends or husbands. No difference was detected in the use of LARCs (LR=2.15, p=0.34).

**Conclusions and Recommendations:** This mHealth intervention did not have the hypothesised impact on unintended pregnancy or LARC use. While it did have an effect on knowledge and shorter-acting methods, including condoms, the lack of impact on condom use with non-paying partners is concerning in view of their role in both pregnancy and HIV transmission. Complementary interventions, including to improve the supply of LARCs and address structural influences on FSWs' health, may be needed to impact biological outcomes in this population.

## FRPEC196

### Using Health Information Technology to Improve Turnaround Time for HIV Recency Testing

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**Background:** In the last two decades, Rwanda has been applauded internationally for its strong national programmatic response. In October 2018, Rwanda initiated the case based surveillance system and index testing to identify new HIV infections and active case finding. Laboratory information systems (LIS) is used to manage samples of newly diagnosed HIV positive patients and allows recency testing results to be sent back to health facilities in a timely manner. This is the analysis of the turnaround time between sample collection at the health facility and the results reception by the healthcare providers.

**Methods:** Since 2016, one hundred and thirty eight health facilities are using the lab Information system to record samples sent to National reference laboratory and to ready results. A sample identification (ID) is constructed to maintain the confidentiality for newly diagnosed HIV positive patients who consent to recency testing. Laboratory information system captures the date of sample collection, testing and HIV recency results delivery dates. Every user at the health facility has credentials to enter data into the system and to read laboratory results.

The data from October 1, 2018 to May, 30<sup>th</sup> 2019 from 99 health facilities were extracted from LIS and exported to Microsoft Excel and STATA version 15 to analyze the turnaround time for results recording into the system and reading by the health care provider.

**Results:** Since October 1<sup>st</sup> 2018 to May 30<sup>th</sup>, 2019, 1198 samples of newly diagnosed HIV infected people who consented for recency testing were sent to NRL from 138 health facilities. Their mean and median age was 33 and 31 respectively. 57.9% were females.

The median turnaround time from sample collection to results release into the LIS was 9 days (iqr 7), while the median time from results reception into the system and being read from the health care provider is 2,4 days. (iqr 4.9)

**Conclusion:** The initiation of the Laboratory Information system has improved the turnaround time of results reception at the health facilities. Such reductions may improve the quality of care and active case finding.

**Keywords:** Laboratory Information system, Recency testing

## **FRPEC197**

### **Getting to Zero: Integrating HIV Prevention with Technology for Better Results, a Chukua Hatua Approach**

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**Issues:** Despite the WHO recommending the introduction of new HIV prevention methods; (PrEP, HIV self testing, and Index testing approaches), there has not been a focused integrated and real time information in a singular platform that persons can access on demand.

**Description:** Chukua hatua App is an android-powered application designed and created in a user-friendly manner so that it is able to promote short and precise PrEP information and uptake with the provision of Frequently Asked Questions.

This application was developed following the need to promote PrEP information access among the MSM/W community when the JHpiego led Bridge to scale project started supporting community based and led organisations to offer PrEP services to MSM/W in Kenya. However, due to the it targets to understand more issue that MSM/Ws might be going through, when trying to figure out what this PrEP is. This application guarantees end-to-end encryption data & information security and clients confidentiality interests where by when a peer is chatting with a counselor (in this case we identified a peer educator), or booking a session, apart from the counselor - only the organizations' admin is able to know from the organizations admins backend who is chatting to who. A client chooses which facility to go to and which specific peer educator and of which cohort he would like him to attend to without necessarily involving no 3<sup>rd</sup> party. This application is designed to meet the current and future trends on not only the MSM/W but also everyone else, ability to access information and counselling from their mobile gadgets.

#### **Lessons learned:**

- Tech and innovations in health might be the key to ensuring universal health services coverage. -as seen through Chukua hatua app which is growing rapidly with new key features being informed by the clients demands. The app received 3000 downloads within 6 months.
- Differentiated service delivery, especially pre and post test counselling can be achieved by having online structured counselling.
- Some persons in need of the services could not due to lack of smart phones or other gadgets capable of downloading.

#### **Next steps:**

- Develop and offline USSD module
- Scale up to include IOS version
- Integrate comprehensive online service delivery, including delivery of PrEP, OST and other HIV prevention commodities.

## FRPEC198

### Aspects Épidémiologiques et Riposte de l'Épidémie de Dengue au Burkina Faso en 2016-2017

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La dengue est l'arbovirose plus répandue dans le monde. Au Burkina Faso, elle constitue un défi majeur dans le contexte de la restructuration du système de santé. Elle affronte difficilement les pays pauvres dont la maladie reste méconnue et les principes de la maladie épidémique mal connus. Notre étude avait pour objectif de préciser l'épidémiologie de la dengue et d'analyser la riposte au cours des épidémies de 2016 et 2017 au Burkina Faso.

**Méthodes:** Ceci est une première critique. Les données ont été entièrement transférées aux agents de santé du périphérique vers le niveau central, sur l'ensemble du pays. Pour la confirmation et le sérotypage, les structures de santé ont été choisies pour le transport des prélèvements

**Résultats:** Le Burkina Faso a enregistré les épidémies épidémiques de 2016 et 2017, avec 17600 suspects de dengue notifiés à 53% de sexe masculin. Il y a une endémicité du pays avec des prévalences plus haut de la dengue dans les zones urbaines (65% dans la région du centre) et pendant la saison pluvieuse. La tranche d'âge de 15-34 ans sont les plus touchées. Les formes graves représentent 8% des cas. La peine de mort est restée faible avec 0,4% en 2017 et 1,2% en 2016. [30/56] du décès. Le taux d'attaque représente environ 2,3 en 2016 contre plus de 13 pour 100 000 habitants. Le sérotypage des échantillons montre une prédominance du virus de type 2 (DENV2 = 72,53%) et une proportion de DENV1 (7,33%), DENV3 (20,14%). Durant ces deux années, les échantillons ont été acheminés vers les centres de santé pour le laboratoire de références, de fièvre hémorragique pour le sérotypage. Parmi les difficultés rencontrées dans le système de santé, la lenteur dans la gestion et la coordination après une notification légère et une confirmation du cas de dengue.

**Conclusions et recommandations:** Impact du Comité d'épidémies sur les épidémies consécutives avec une mission de lutte contre la dengue ainsi que la riposte épidémique.



## FRPEC199

### HIV Incidence by Age in Sub-Saharan African Men: Implications for Medical Male Circumcision

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**Background:** Male circumcision (MC) partially protects men from acquiring HIV through heterosexual sex, and voluntary medical MC (VMMC) is a key HIV prevention program in many African countries. Prioritizing subpopulations with high HIV incidence increases near-term impact. Thus, many countries prioritize men 15-29 years old, or similar ages, based on incidence modeling. The Population-based HIV Impact Assessments (PHIAs) are national surveys collecting, among others, measured HIV incidence and self-reported MC status, allowing reassessment of VMMC age targeting with updated incidence and MC coverage.

**Methods:** Among VMMC countries, PHIAs were completed by 2015-2017 in Eswatini, Lesotho, Malawi, Namibia, Tanzania, Uganda, Zambia, and Zimbabwe. HIV incidence was measured with Limiting-Antigen Avidity Assays (ODn < 1.5s, VL > 1000 copies/mL and no antiretrovirals detected). MC status was self-reported as medical, nonmedical or none. Weighted annualized incidence and MC status were analyzed by country and age group, 15-29 vs. 30-45 years.

**Results:** Among men aged 15-29 years, HIV incidence ranged from 0.02% (Namibia) to 1.04% (Eswatini). Among men aged 30-45 years, it ranged from 0.00% (Eswatini, though men >45 years had incident cases) to 2.28% (Lesotho). Incidence was higher in men aged 30-45 years in each country but Eswatini, and in the pooled analysis (0.48 vs. 0.13%,  $p = .001$ ). Median medical MC coverage was 27% in 15-29 year olds, ranging from 12% (Malawi) to 57% (Tanzania); and 20% in 30-45-year-olds, ranging from 6% (Zimbabwe) to 47% (Tanzania). In all countries, 15-29-year-olds had higher coverage than 30-45-year-olds.

**Conclusions and Recommendations:** Men 30-45 years old have far higher HIV incidence than those 15-29 years, possibly due to lower VMMC coverage and higher risk, and therefore need fewer VMMCs per HIV infection averted. They also have high unmet VMMC need. We interpret Eswatini's case as an artifact of the upper age cutoff and few total incident cases. VMMC programs could revisit prioritizing men 30-45 years to maximize near-term impact, particularly where incidence differences between age bands are large. PHIAs were not powered for sex-and-age-specific incidence, and self-reported MC may be inaccurate. Planned expansion of recency testing in routine HIV care could also provide more information on the age distribution of incident cases among all cases, including the finer age bands needed for program planning.

## FRPEC200

### Service Delivery Interventions to Increase Uptake of Voluntary Medical Male Circumcision for HIV Prevention

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**Background:** Voluntary medical male circumcision (VMMC) presents a unique opportunity to engage men in HIV services. As HIV prevention programs including VMMC seek to maximize program impact and efficiency, specific strategies to enhance uptake are critical.

**Methods:** We systematically reviewed the literature to evaluate the impact of service delivery interventions (e.g., facility layout, co-location of services, or home/community outreach services) on VMMC uptake among adolescent and adult men. For the main effectiveness review, we searched for publications or conference abstracts that measured VMMC uptake or uptake of HIV testing or risk reduction counselling within VMMC services. We synthesized data by coding categories and outcomes. We also conducted complementary reviews on acceptability, values and preferences, costs, and feasibility.

**Results:** Four randomized controlled trials and six observational studies were included in the effectiveness review. Studies took place in South Africa, Tanzania, Uganda, Zambia, and Zimbabwe. They assessed a range of service delivery innovations, including community-, school-, and facility-based interventions. Overall, interventions increased VMMC uptake; some successfully improved uptake among age-specific subpopulations, but urban-rural stratification showed no clear trends. Interventions that increased adult men's uptake included mobile services (compared to campaigns and static facilities), home-based testing with active referral follow-up, and facility-based HIV testing with enhanced comprehensive sexual education. Six acceptability studies suggested interventions were generally perceived to help men choose to get circumcised. Eleven cost studies suggested interventions create economies of scale and efficiencies. Three studies suggested such interventions were feasible, improving facility preparedness, service quality and quantity, and efficiencies.

**Conclusions and Recommendations:** Innovative changes towards differentiated, people-centered VMMC services can improve VMMC uptake and may be applied more broadly to other HIV or diverse health services. Implementing such interventions shows promising results, but evidence gaps persist due to inconsistent intervention definition and delivery, limited age disaggregation, and few high-quality, published evaluations.

## FRPEC201

### HIV Incidence by Male Circumcision Status in Population-based HIV Impact Assessment (PHIA) Surveys from Eight Sub-Saharan African Countries, 2015-2017

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**Background:** Male circumcision (MC) offers men lifelong partial protection from heterosexually-acquired HIV infection. The Population-based HIV Impact Assessments (PHIAs) are national surveys estimating national HIV incidence in the setting of HIV programs. We assessed HIV incidence by MC status in eight countries implementing voluntary medical male circumcision (VMMC) with completed PHIAs.

**Methods:** Data were pooled from PHIAs conducted in Eswatini, Lesotho, Malawi, Namibia, Tanzania, Uganda, Zambia and Zimbabwe from 2015-2017. HIV incidence was measured using a recent infection testing algorithm (Limiting-Antigen Avidity assay [OD<sub>n</sub> < 1.5s], viral load [VL] >1000 copies/mL and detection of antiretroviral treatment [ART]). We analyzed incidence by self-reported MC status, using MC provider type to distinguish between medical and non-medical MC because the latter may not provide comparable protection if incomplete. We controlled for country, marital status, urban setting, sexual risk behaviors, and mean VL among women at the sub-national unit-level (to account for ART scale-up), and adjusted for survey weights. Analyses were age-stratified (15-34 and 35-59 years) because age was associated with MC status. Annualized incidence rates and 95% confidence intervals of circumcised men (medical and non-medical MC) were compared to uncircumcised men using R inctools package.

**Results:** Annualized HIV incidences were 0.03% (0.00-0.08%), 0.33% (0.04-0.61%), and 0.27% (0.08-0.47%) among men 15-34 years reporting medical MC, non-medical MC, and being uncircumcised, respectively. Among men 35-59 years, HIV incidences were 1.11% (0.26-1.96%), 0.34% (0.00-0.68%), and 0.45% (0.12-0.79%) in these same groupings. The incidence difference between medically circumcised and uncircumcised men was statistically significant in men 15-34 years ( $p < 0.01$ ) but not 35-59 years ( $p = 0.14$ ). HIV incidence differences were not statistically significant between non-medically circumcised and uncircumcised men in both age groups ( $p = 0.98$  and  $0.68$ ).

**Discussion:** Medical MC was associated with lower HIV incidence in men aged 15-34 years in nationally-representative surveys in sub-Saharan Africa. Non-medical MC was not associated with reduced incidence. Few recent infections in the PHIAs resulted in wide confidence intervals. These findings are consistent with the expected ongoing VMMC program impact and highlight the importance of VMMC as part of the HIV response in sub-Saharan Africa.

## FRPEC202

### **Economic Compensation Interventions to Increase Uptake of Voluntary Medical Male Circumcision for HIV Prevention: A Systematic Review and Meta-analysis**

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**Background:** Economic compensation interventions may help support higher voluntary medical male circumcision (VMMC) coverage in priority sub-Saharan African countries. To inform World Health Organization guidelines, we conducted a systematic review of economic compensation interventions to increase VMMC uptake.

**Methods:** Economic compensation interventions were defined as providing money or in-kind compensation, reimbursement for associated costs (e.g. travel, lost wages), or lottery entry. We searched databases and conference abstracts for studies with comparative designs. Outcomes of interest were VMMC uptake, HIV testing and safer sex/risk reduction counseling uptake within VMMC, community expectations about compensation, and potential coercion. We screened citations, extracted data, and assessed risk of bias in duplicate. We conducted random-effects meta-analysis. We also reviewed studies examining acceptability, values/preferences, costs, and feasibility.

**Results:** Of 2484 citations identified, five randomized controlled trials (RCTs) and three observational studies met our eligibility criteria. Studies took place in Kenya, Malawi, South Africa, Tanzania, Uganda, Zambia, and Zimbabwe. Meta-analysis of four RCTs showed significant impact of all types of economic compensation on VMMC uptake (relative risk: 5.23, 95% CI: 3.13 to 8.76); one RCT not combinable in meta-analysis also showed positive effects. RCTs of food/transport vouchers and conditional cash transfers generally showed increases in VMMC uptake, but lotteries, subsidized VMMC, and receiving a free t-shirt/soccer tickets appeared somewhat less effective. Three observational studies showed mixed impact. Six additional studies suggested economic compensation interventions were generally acceptable, valued for addressing key barriers, and motivating to men. However, some participants felt they were insufficiently motivating or necessary; one study suggested they might raise community suspicions. One study from South Africa found a program cost of US\$91 per additional circumcision and cost of US\$450-\$1350 per HIV infection averted.

**Conclusions and Recommendations:** Economic compensation interventions, particularly transport or food vouchers, showed positive impact on VMMC uptake among adult men and were generally acceptable to potential VMMC clients. Carefully selected economic interventions may be a useful targeted strategy to enhance VMMC coverage.

## FRPEC203

### Active Surveillance for Adverse Events Associated with Shangring Circumcision for HIV Prevention in Kenya

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**Background:** Since 2011, the ShangRing device has been evaluated in Kenya's voluntary medical male circumcision (VMMC) program according to World Health Organization guidelines. Compared to conventional surgical circumcision, the ShangRing procedure is shorter, eliminates glans injury and does not require suturing. After a pilot evaluation of ShangRing in 2011, we conducted active surveillance for adverse events (AE) in 2017-2018 to assess its safety and acceptability and identify any operational bottlenecks to its widespread use.

**Methods:** Prospectively, from January 2017 to August 2018, HIV-negative men aged 13 years or older seeking VMMC at six health facilities across five counties were offered ShangRing with injectable local anesthetic as an alternative to conventional surgical circumcision. Providers clearly described both procedures to clients before letting them choose. Outcome measures for clients who chose ShangRing included the proportion who were clinically eligible, had successful device placement, experienced AEs, and did not return for device removal. Clients who missed follow-up appointments were contacted through phone calls and home visits to ensure ShangRing removal and documentation of AEs.

**Results:** Out of 3,692 eligible clients, 1,080 (29%) chose ShangRing; of these, 11 (1.0%) were clinically ineligible, 17 (1.6%) underwent conventional surgery due to lack of appropriate device size at the time of the procedure, and 1,051 (97.3%) had ShangRing placement. There was one severe AE; a failed ShangRing placement (0.1%) managed by conventional wound suturing and two moderate AEs, which entailed post removal wound dehiscence and bleeding that resolved without complications. The overall AE rate was 0.3%. All clients returned for device removal 5-11 days after the procedure. Stock out of appropriate device sizes for 17 (2%) of the clients at the time of placement was the only operational bottleneck observed.

**Conclusions:** ShangRing circumcision is effective and safe in Kenya. Its roll out in VMMC could enhance the program through its unique public health benefits and wider choice of circumcision methods available for males. Public education on ShangRing's availability and advantages plus WHO amendment of its prequalification for use in boys 10-12 years, application under topical anaesthesia and no-flip technique may increase its appeal and stimulate incremental demand for VMMC.

## **FRPEC204**

### **Voluntary Medical Male Circumcision VMMC in Southern Africa by Aidsfree**

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**Issues:** Voluntary medical male circumcision, or VMMC, is extremely effective in preventing new HIV infections and curbing the HIV epidemic. VMMC programs also increase men's opportunities to seek health care—most importantly, HIV testing services. Scaling up VMMC for HIV prevention is thus critical to combination prevention strategies for saving lives and achieving an AIDS-free generation. Fourteen countries have been prioritized for scale-up: Botswana, Ethiopia, Kenya, Lesotho, Malawi, Mozambique, Namibia, Rwanda, South Africa, Swaziland, Uganda, the United Republic of Tanzania, Zambia, and Zimbabwe. AIDSFREE will work to meet the ambitious goal of scaling up VMMC to achieve 80 percent male circumcision in these 14 countries by 2016, as specified in the Action Framework developed jointly by WHO, UNAIDS, World Bank, the Bill & Melinda Gates Foundation, and PEPFAR.

**Descriptions:** Male circumcision is surgical removal of the foreskin - the retractable fold of tissue that covers the head of the penis. The inner aspect of the foreskin is highly susceptible to HIV infections. Trained health professionals can safely remove the foreskin of infants, adolescents and adults (medical male circumcision).

#### **Lessons learned:**

**Next steps:** AIDSFREE is helping USAID-supported VMMC programs in eastern and southern Africa to adapt their programs based on evolving guidance from WHO and PEPFAR. Technical assistance includes offering on-site, in-person support for managers and VMMC providers in the field; developing and implementing training programs; conducting needs assessments; documenting and disseminating best practices; and developing other resources as needed to serve a broad variety of stakeholders.

## FRPEC205

### Safe Male Circumcision in South Africa. A Success Story

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**Background:** Male circumcision reduces risk of HIV acquisition by ~60% among males. As such, it is a key prevention component of the HIV response in South Africa. Over 4,000,000 voluntary medical male circumcisions (VMMCs) have been performed in South Africa through 2018. However, in some areas where traditional male initiation (TMI) rites of passage into adulthood include male circumcision (MC), the adoption of VMMC - which offers distinct advantages in terms of amount of foreskin tissue removed and procedure safety - has been slow. We analyzed VMMC data in areas that practice TMI to assess the impact of VMMC integration into the CDC-supported VMMC program.

**Methods:** CDC supports VMMC partners to deliver VMMC services to male's  $\geq 10$  years in six districts where traditional male initiation is the norm: Nkangala district in Mpumalanga Province and Alfred Nzo, Amatole, Buffalo City, Chris Hani, Oliver Tambo districts in Eastern Cape Province. Implementing partners report VMMC data to PEPFAR quarterly. We report the total number of CDC-supported VMMCs for the year before and year after successful engagement with local traditional structures and subsequent integration of VMMC services into TMI rites of passage (Nkangala ~2017, Eastern Cape districts ~2018), comparing these years using chi-square test.

**Results:** In Nkangala, 8,373 MCs were reported in 2016 before VMMC was integrated into TMI and 20,778 were reported in 2017 after this integration ( $p < 0.01$ ). Likewise, in the 5 Eastern Cape districts, 11,019 MCs were reported in 2017 before TMI integration and 59,836 were reported afterward ( $p < 0.01$ ).

**Conclusions and Recommendations:** Integrating VMMC into TMI rites of passage in Mpumalanga and Eastern Cape Provinces was associated with an observed increase in the number of men undergoing VMMC in these areas. VMMC integration into TMI is a mutually beneficial situation, helping to maintain traditional identity and respect autonomy while also improving the safety of the circumcision procedure and reaching more men for this HIV preventive intervention. Continued engagement between VMMC programs and traditional structures in South Africa is warranted.

## FRPEC206

### Feasibility and Acceptability of a Two-way Texting Intervention for Post-operative Follow up for Voluntary Medical Male Circumcision

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**Background:** Voluntary medical male circumcision (MC) is safe and effective: the vast majority of men heal without complication. However, MC programs require multiple postoperative visits. In Zimbabwe's context of rapid MC scale-up, high phone ownership and health worker shortages, a randomised control trial (RCT) sought to

- 1) determine if two-way texting (2wT) between clients and MC providers could reduce provider workload while safeguarding client safety;
- 2) determine 2wT costs (forthcoming); and
- 3) assess 2wT usability and feasibility. Aim 1 results suggest that client safety was maintained and workload reduced. To inform 2wT scale up, we present Aim 3 results.

**Methods:** Adult MC clients with cell phones were randomised 1:1 on day of MC: 359 (control) attended routine in-person visits; 362 responded to 13 daily SMS texts with interactive texting triage or in-person follow-up only if desired or Adverse Event (AE) suspected. Medic Mobile open-source Community Health Toolkit was employed. A day 14 study-specific review was conducted for all clients; a subset of 100 texting clients filled a self-administered usability survey to gauge satisfaction and solicit feedback. Among providers, five completed assessments on system use; eight key informant interviews were conducted.

**Results:** Men preferred one daily (76%), morning (86%) text. The overall response rate (90%) suggested 2wT feasibility. Clients believed 2wT saved them time and money. Clients felt confident, comfortable, satisfied and safe with SMS follow-up; few noted texting challenges or concerns about healing. Healthcare workers felt 2wT was easy to use and reduced workload. One clinician noted fewer reviews "means you have enough time for other duties." Another clinician believed 2wT counselling increased self-efficacy to heal independently: men "can realise if danger is developing and then inform us." For scale-up, clinicians suggested follow-up with non-responders and reminders that 2wT was not an emergency service. Both clients and providers recommend 2wT for scale-up.

**Conclusion:** Usability results strongly suggest that 2wT is usable and feasible for providers and clients. Clients with concerns appeared confident to receive guidance via text. Postoperative counselling likely increased client confidence to report potential AEs via 2wT and seek care when desired. 2wT implementation for adults could reduce the burden on overstretched healthcare workers and clients.



## FRPEC207

### Recruiting Men for Voluntary Medical Male Circumcision through Antenatal Care Clinics: The Project IQ Malawi Experience

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**Background:** Voluntary medical male circumcision (VMMC) is a crucial HIV prevention program in sub-Saharan Africa. However, recruiting 'older' clients (15 years and above) remains a challenge. In 2018, only 63% of VMMC clients in Malawi were aged >15 years. Existing HIV service delivery platforms can be leveraged to recruit clients in key age groups to VMMC services. Antenatal care (ANC) clinics in Malawi already engage male partners to promote couples HIV testing and family-based HIV care. Integrating VMMC recruitment in ANC could improve uptake by males aged above 15 years.

**Methods:** Jhpiego implements VMMC in Lilongwe District, Malawi through Project Improving Quality (Project IQ). To recruit uncircumcised HIV-negative male partners aged above 15 years, Project IQ began recruiting men for VMMC from the ANC clinic in Bwaila hospital in November 2018. VMMC mobilizers were stationed in ANC to provide messaging and educational materials on VMMC during routine ANC health education sessions. Mobilizers document the client's contact information and are available to escort clients for same-day MC services. Those who need more time to decide are provided referral sheets or appointment cards and their preferred dates documented for follow up. Comparison was made of mobilizers' time spent at ANC clinic per ANC client getting VMMC to time spent on community mobilization (CM) per client getting VMMC, for the period November 2018 to June 2019.

**Results:** 645 men accompanied their spouses to ANC. Of these, 332 (51%) received VMMC messages as part of recruitment for VMMC services, and 56 (9%) received VMMC. All VMMC clients recruited from the ANC clinic were above 15 years old with a median age of 29 years (range 19-40). The mean age of those mobilized and recruited through routine community mobilization work was 23 years (range 10-32). The average mobilization time per MC client at ANC (0.2 hours) was 3 times less than for standard CM (0.6 hours)

**Conclusions and Recommendations:** These results reveal an efficient strategy to reach older men in this large hospital setting. Mobilizer time required per VMMC at the ANC clinic is much lower than time for routine mobilization work. This approach could be beneficial to other VMMC programs in reaching older men for VMMC services. However, more experience is needed to determine its feasibility, efficiency and cost effectiveness in less centralized settings.

## FRPEC208

### **Sexually Transmitted Infection Clinics: A New Platform for Reaching High-risk Men for Voluntary Medical Male Circumcision in Malawi**

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**Background:** Voluntary medical male circumcision (VMMC) is a key HIV prevention program in sub-Saharan Africa. Its HIV risk reduction benefits are greatest for men at highest risk, such as those with sexually transmitted infections (STIs). However, there is little experience with linking with STI clinics to improve VMMC uptake by STI clients. We measured outcomes of an initiative by Jhpiego's Project Improving Quality (IQ) to recruit VMMC clients from the STI clinic at Bwaila Hospital in Lilongwe district, Malawi, where HIV prevalence amongst male STI clients aged 15-64 years is 8.5%.

**Methods:** Starting in October 2018, VMMC education was added to routine STI clinic health education sessions. Interested clients were then offered 1:1 discussions with a VMMC mobilizer stationed at the clinic. Those who chose VMMC were accompanied to immediate on-site VMMC or, as preferred, given an appointment date or a referral sheet for an unspecified date. Those missing appointments received a follow-up call at two weeks. STI clinic providers were also trained to educate clients on VMMC benefits, refer them to the mobilizer, provide educational materials, and record referrals for follow-up. Data on clients accessing VMMC were recorded in Project IQ's routine data system, including client age and mobilizer time, for both STI recruitment and routine VMMC community mobilization (CM), through June 2019. Mobilizer times per VMMC were compared between these approaches, and the conversion rate to VMMC among STI clients and contribution of STI clinic to total VMMCs performed were calculated.

**Results:** During the study period, 1449 (57% of all STI clients registered at the STI clinic) uncircumcised male STI clients were counselled on VMMC. Of those, 159 (11%) accessed VMMC, or 7% of all circumcisions performed at Bwaila in that period. The majority of VMMC clients from the STI clinic were in the age category of 15-29 years (63%). Recruiting VMMC clients through STI clinics also took less time per VMMC than CM. The average mobilizer time per MC in the STI clinic was 3.6 times less than for standard CM, at 0.18 and 0.68 hours respectively.

**Conclusion and Recommendations:** STI clinics are a valuable platform for recruiting men at higher risk of HIV to VMMC, and in our setting with onsite VMMC services, our approach also minimized mobilizer time. Further analyses are required to assess the impact of scaling up the initiative to other settings such as rural high-volume sites.

## FRPEC209

### Financial Compensation Increases Voluntary Medical Male Circumcision Uptake among High-risk Men in Zambia

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**Background:** A well-documented barrier to voluntary medical male circumcision (VMMC) is financial loss due to time taken to undergo and recover from VMMC. We explored whether financial compensation for the opportunity cost of undergoing VMMC would increase VMMC uptake among high-risk men in Zambia.

**Methods:** We implemented a 2-phased outcome evaluation of an enhanced demand creation strategy and financial compensation to increase VMMC uptake among high-risk Zambian men. Men were recruited by health promoters at community venues (e.g., bars, taxi stands); target sample size was 8,000 men per phase. Eligible men were aged  $\geq 18$  years, uncircumcised, and self-reported  $\geq 1$  HIV risk factor (HIV-positive sex partner,  $\geq 2$  concurrent sex partners, treated for a sexually-transmitted infection, sex while drunk, transactional sex, or drug use) in the past 6 months. In Phase 1 (June-December 2018), we implemented human-centered design-informed interpersonal communication (IPC) in two districts. Consenting men were assessed for HIV risk; high-risk men were enrolled, engaged in IPC, and referred for VMMC. In Phase 2 (February-March 2019), we added financial compensation of 200 ZMW (~US\$17). We calculated the conversion rate (% high-risk men circumcised  $\leq 3$  months of enrollment) for each phase and compared them using Pearson chi-square.

**Results:** Of the 6,858 participants enrolled in phase 1, 210 (3.1%) underwent VMMC. Of the 3,750 enrolled in phase 2, 1392 (37.1%) underwent VMMC as of June 5. Both phases were designed to run for 6 months but due to a rapid and significant increase in VMMC uptake, phase 2 enrollment was stopped after 7 weeks. The proportion of men undergoing circumcision was significantly higher in phase 2 compared to phase 1 (37.1% vs 3.1%;  $p < 0.000$ ).

**Conclusions and Recommendations:** Financial compensation equivalent to 3 days of missed work significantly and rapidly increased VMMC uptake among Zambian high-risk men compared with enhanced demand creation alone. Compensating men who undergo VMMC might be an effective strategy for increasing service uptake among high-risk men in Zambia, and other VMMC programs could consider a similar approach where demand among high-risk men has been low.

## FRPEC210

### Positive Impact for Implementing VMMC: A 10-years Jhpiego Program in Rwanda

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**Background:** In 2008, Rwanda endorsed the WHO and UNAIDS recommendation to adopt voluntary medical male circumcision (VMMC) as part of comprehensive HIV prevention. Modeling studies demonstrated that priority countries reaching 80% circumcision coverage of men (aged 15 to 49) by 2025 could substantially impact HIV epidemics; Rwanda's target was set to 2 million VMMCs. Jhpiego began supporting VMMC in the Rwanda Defense Forces (RDF), with PEPFAR funding through the U.S. Department of Defense in 2009, serving both soldiers and civilians communities. The aim of this abstract is to highlight Jhpiego's contribution to Rwanda's VMMC for HIV prevention scale-up endeavor to date.

**Methods:** We reviewed program data from Jhpiego-supported sites from October 2009 through June 2019. Policies and programmatic strategies facilitated rapid expansion: national guidelines recognized tasking shifting of surgery to nurses; WHO's model for optimizing volume and efficiency (MOVE) approach was promoted; and, the PrePex device was offered as a non-surgical circumcision option since February 2014. To increase access among rural populations, VMMC campaigns were rolled out in remote medical posts and VMMC was integrated into annual citizen military outreach program.

**Results:** Over the decade, 2009-2019, VMMC program reached 324,577 males. Jhpiego has helped build capacity for HIV prevention in RDF sites through training program: 887 health care professionals (HCPs) were trained in VMMC skills, 291 in VMMC Surgical Skills, 123 in PrePex; 367 in specific MC counselling, 64 in adverse event management, 16 in continuous quality improvement (CQI) using Standard Based Management and Recognition approach ; 33 trained as trainers . The 2015 Rwanda Demographic and Health Survey showed a doubling of male circumcision prevalence to 30% (compared to Rwanda DHS 2005). Through the VMMC scale-up, 309,914 clients were tested for HIV, and 644 tested positive and linked to care and treatment.

**Conclusion:** RDF VMMC program supported by DOD through PEPFAR has played a key role in fighting HIV/AIDS and has contributed up to 17% of national progress towards the 80% scale-up goal, including awareness of HIV status and HIV treatment among men in Rwanda.

## FRPEC211

### Positive Impact of Device-based Circumcision versus Conventional Surgery: Five Years' Experience from Rwanda

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**Background:** In 2008, Rwanda endorsed WHO and UNAIDS recommendation to adopt voluntary medical male circumcision (VMMC) program as part of comprehensive HIV prevention. Studies show that priority countries reaching 80% male circumcision coverage between 2015 and 2025 could substantially impact HIV epidemics, and the target for Rwanda was set to 2 million VMMCs. This goal has led the country to introduce device-based circumcision alongside conventional surgical circumcision since February 2014.

**Description:** Jhpiego led the development of a PrePex learning resource package, which was utilized by selected trainees, including doctors, nurses and midwives; on site post-training coaching and mentorship were provided to ensure retention and mastery of skills. Continuous quality improvement system were implemented to ensure that VMMC services are offered within acceptable standards. The PrePex center of excellence based in Rwanda Military hospital trained a pool of trainers for the country and Eastern and Southern African region.

**Lesson learned:** In total 258,950 males were circumcised in Jhpiego Rwanda Defense Force VMMC supported sites from February 2014 to June 2019. Of them 167,970 (65%) were done through conventional surgical methods, and 90,950 (35%) by the PrePex device. Apart four severe adverse events including three tetanus cases, PrePex has helped to bend the curve of adverse event from 0.2% to 0.04%. The outbreak of tetanus cases in VMMC programs resulted in a WHO recommendation of two tetanus vaccinations before placement of the PrePex device. This resulted in a sharp decline of PrePex use, leading the manufacturer to phase out production.

**Conclusion:** PrePex has facilitated VMMC scale up in Rwanda and gives option of method. This abstract suggests the government to introduce another device, like the WHO-prequalified Shang Ring, which only requires a single tetanus vaccination before device use, as a circumcision option for clients reluctant to surgery.

## FRPEC212

### Evidence of Task Shifting Early Infant Male Circumcision Services in Rwanda

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**Background:** The Government of Rwanda adopted voluntary medical male circumcision (VMMC) for HIV prevention in 2008, and early infant male circumcision (EIMC) as a long-term strategy in its 2009-2012 National Strategic Plan. The aim of this retrospective study was to assess how task shifting EIMC services to nurses and midwives from physicians enabled integration of EIMC within maternal newborn child health (MNCH) services.

**Description:** In 2010, the Rwanda Biomedical Center (RBC) piloted implementation of EIMC to determine feasibility of the service using Mogen Clamp. In 2015, RBC and UNICEF requested Jhpiego to support EIMC implementation for building capacity of health system to scale up EIMC as a part of comprehensive MNCH services. The scope of work included adaptation of training materials, training providers, and establishing a quality assurance system. By the end of the project in February 2019, EIMC services were fully integrated in 11 hospitals.

**Lessons learned:** Jhpiego led the development of a learning resource package on the Mogen clamp. Trainings were conducted using a competency-based training approach. Anatomic models were used for practice the skills before performing the procedure on clients. Pre course and post-test questionnaires helped determine individual and group knowledge. During the course, checklists were used to assess skills. Supportive supervision and mentoring were implemented to reinforce skills and knowledge acquisition. As per MOH norms and guidelines, trainees were doctors, nurses and midwives, based on their practice of minor surgery experience. Shortly after trainings, onsite post-training coaching and mentorship were conducted for reinforcement of hands-on retention and mastery of skills. To ensure that male circumcision services were aligned within acceptable standards, Jhpiego introduced a quality improvement system and trained a pool of national trainers. 75 healthcare professionals were trained as EIMC providers. Sixteen selected providers were trained as trainers and they co-trained subsequent sessions. 2,598 infants, received EIMC; nurses and midwives performed 95% (2,467) of the procedures.

**Conclusions/Next steps:** Task- shifting of EIMC services from doctors to nurses and midwives, enhanced with 59 out of 75 providers, expanded the reach of EIMC services and helped ensure high quality of services. Integration of VMMC and EIMC skills trainings in pre-service medical education is imperative for sustainability purpose.

## **FRPEC213**

### **Defining Sustainability for the Voluntary Medical Male Circumcision Programme in Zimbabwe**

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**Issues:** Zimbabwe has been implementing the VMMC programme since 2009 after adopting it in 2007 as part of a combination of HIV prevention interventions. The programme was set up to follow three critical phases that were outlined to shape the long term strategy required to ensure effective impact. These are the Preparatory phase, Scale up phase and the Sustainability phase which ideally results in cost-effective, integrated, routine VMMC services. Given that some districts have already made progress towards reaching and maintaining VMMC saturation, we sought to determine what sustainability means for the VMMC programme in Zimbabwe.

**Descriptions:** Qualitative data was collected using interviewer administered questionnaires at national and subnational level. Ministry of Health senior management, Provincial and District Health Executives were included in the interviews to identify key enablers and barriers to sustainable VMMC programming. Data was grouped into thematic pillars focusing on management and coordination, demand generation, VMMC services, strategic information, programme quality and programme financing.

**Lessons learned:** Eight characteristics of sustainability for VMMC were identified as a program that has: 1) Extended reach of services 2) Tailored to the target age cohort 3) Evidence guided 4) Affordable 5) Policy guided 6) Operational sustainable 7) Integrated programming and 8) Rooted in the community. Key cross cutting themes across all pillars were the need for decentralized services, integrated programming, and maintenance of quality service provision.

**Next steps:** The information gathered was used to inform the development of the new national VMMC Strategy- Sustainability Transition Implementation Plan 2019-2021. In 2019, the Strategy was launched and is now being implemented nationally across all districts.

## FRPEC214

### Identifying Sustainable Service Delivery Models to Maintain Medical Male Circumcision Coverage in Western Kenya: Baseline and Year One Pilot Findings

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**Background:** Since 2008, Kenya has implemented voluntary medical male circumcision (VMMC) for HIV prevention, initially prioritizing males aged 15-49 years for rapid population HIV incidence reduction. Once at 80% coverage, Kenya added 10-14 years to priority ages, as a long-term strategy to sustain coverage. Potential efficiencies from targeting this group, accessible through schools and high in VMMC demand, could enable low-cost, domestically-affordable financing and sustainable VMMC services.

We implemented and evaluated three VMMC service models (static, mobile, mixed) for 10-14 year olds, in distinct areas of Migori and Siaya counties, to identify models that can maintain VMMC uptake, be cost-effective, and facilitate government ownership.

**Methods:** Targets for each area were set using age band population projections from the national census and expert opinion on baseline 10-14-year-old circumcision coverage. Targets were designed to achieve 90% coverage over two years, and maintain it thereafter. VMMC numbers were collected and analyzed monthly. Annual key informant surveys using 5-point Likert scales were self-administered by key program staff and community members and mean score calculated. Expenditures by implementing partners and the government were assessed.

**Results:** From December 2017 to September 2018 in Siaya and Migori, 11,700 VMMCs were done among males 10-14 years old living in model areas. Cumulative uptake of static, mobile and mixed models against targets was 1,781 (63%), 1,459 (51.4%), and 864 (67.7%) for Siaya, and 1,207 (44.9%), 1,419 (80.6%), and 4970 (140.4%) for Migori, respectively. Baseline unit expenditure (UE) for Siaya was \$68.00 and for Migori \$72.50. Implementing partners made 94% and 87% of total expenditures, respectively. From baseline, Year 1 qualitative survey scores improved in most domains, including quality management (4.0 to 4.3) and efficiencies (3.5 to 3.7). Dependence on external funding sources remained a key weakness.

**Conclusions and Recommendations:** Final selections of sustainable VMMC models in Kenya will hinge on performance and UE. All models performed adequately for a startup period, with the mixed model performing best. The perception of progress toward government ownership of management and human resources aspects is notable. The transition to domestic financing will take multiple years, and forthcoming analysis of Year 1 expenditures may begin to address costs and Kenya's capacity to implement country-financed VMMC.



## FRPEC215

### **Connecting through Smart Linkages: Assessing the Linkage of Voluntary Medical Male Circumcision Clients to Adolescent Sexual and Reproductive Health (ASRH) Services in Zimbabwe**

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**Background:** The Smart-LyncAges project was piloted in Bulawayo city and Mt Darwin district of Zimbabwe, to increase the utilization of Adolescent Sexual Reproductive Health (ASRH) services through referral of Voluntary Medical Male Circumcision (VMMC) clients to youth / ASRH centers. The objective of the project was to assess the feasibility and capacity strengthening requirements to enhance ASRH /VMMC linkages in order to inform transition to longer term VMMC strategies. Since its inception in 2016, there has been no assessment of performance of the referral system. Thus, this study aimed to assess the proportion of VMMC clients getting 'successfully linked' to ASRH services and factors associated with not being linked.

**Methods:** This was a cohort study using routinely collected secondary data. All VMMC clients (aged 10-24 years) referred for ASRH services during October-November, 2018 were included. Those participants registered for ASRH services within three months of referral were considered as 'successfully linked'. The proportion of 'successfully linked' was summarized as percentages with 95% confidence interval (CI). Adjusted relative risks (aRR) using generalized linear model was calculated as a measure of association between client characteristics and not being linked.

**Results:** Of the 1478 VMMC clients referred, 463 (31.3%, 95% CI- 30.0-33.8) were 'successfully linked' to ASRH services and the median (IQR) duration for linkage was 6 (0-56) days. Receiving referral from Bulawayo Metropolitan Circumcision Clinic (aRR-1.4 (95% CI 1.2-1.7)) and getting VMMC services at outreach facilities (aRR 1.2 (95% CI 1.1-1.3)) were independently associated with not registering for ASRH services.

**Conclusions and Recommendations:** Linkage to ASRH services from VMMC is possible as one-third referred VMMC clients were successfully linked. This might be considered for long term VMMC and ASRH sustainable programming. However, there is need to explore the reasons for not accessing ASRH services in two thirds of the adolescents and taking corrective actions to improve the linkages especially for the VMMC clients accessing services in the metropolitan clinic and outreach center.

## FRPEC216

### Male Circumcision and HIV Infection in Women - Systematic Review of Evidence

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**Background:** Women benefit indirectly from male circumcision because of reduced HIV acquisition and hence prevalence in men. Observational studies suggested HIV-negative women with HIV+ circumcised partner were less likely to acquire HIV than those with uncircumcised partner, but a randomized trial (RCT) of circumcision in HIV+ men suggested higher though not statistically significant risk of female HIV acquisition. To inform new WHO guidance on Voluntary Medical Male Circumcision (VMMC) for HIV prevention, we conducted a systematic review of impact of circumcision on HIV infection in women.

**Methods:** PubMed search for 'HIV infection' and 'male circumcision' identified 1 RCT and 6 observational cohort studies with data on HIV risk in women according to partner's circumcision status.

**Results:** HIV+ men in an RCT of immediate or delayed circumcision enrolled female partners to assess impact on women. HIV incidence was 11.5/100 py in partners of circumcised and 6.9/100 py of uncircumcised men (incidence ratio [IR] 1.6 [95% CI 0.6-3.7]). Excess risk was confined to couples who resumed sex before wound healing, consistent with a study of HIV+ men showing higher penile HIV shedding for 3 weeks following circumcision (Tobian PLoS Med 2015).

Two observational cohorts in serodiscordant couples showed lower incidence in partners of circumcised than uncircumcised HIV+ men (pooled adjusted IR 0.59 [0.35-0.99]). In 4 cohorts of women with undocumented or mixed partner HIV status pooled adjusted IR was 0.75 (0.56-1.00).

**Conclusions:** The discrepancy between the RCT and observational cohorts is likely explained by duration of exposure to the circumcised partner (several years in the observational studies, only recently in the RCT) and resumption of intercourse before wound healing. We believe there is biological plausibility for partners of circumcised men to be at lower long-term risk of HIV - less viral shedding after wound healing (Tobian PLoS Med 2015), fewer penile anaerobes following circumcision (Liu MBio 2013), lower incidence of bacterial vaginosis (BV) and severe BV in partners of circumcised men (Gray AJOG 2009) - but time until lower risk manifests is unknown. The short-term post-circumcision risk underlines the importance of HIV testing before VMMC, delaying VMMC for HIV+ men until stable on ART for their own health and preventing onward transmission, stressing sexual abstinence until wound healing, and the value of reaching adolescents prior to sexual debut.

## FRPEC217

### **Barriers to Uptake of Voluntary Medical Male Circumcision (VMMC) among Men Aged above 24 Years in Turkana West Subcounty, Kenya**

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**Background:** There has been limited uptake of VMMC services among men above 24 years in Kenya. In Turkana County, many men do not seek for VMMC services because of fear of pain and lack of partner support. Between April and December 2018, a total of 5,555 males from the undertook VMMC services, out of which only 5% were aged above 24 years. This was very low compared to the proportion of men in this age group in Turkana county, estimated at 29%. This study focused on identifying the reasons for low uptake of VMMC among men above 24 years, and potentials for increasing uptake of VMMC services.

**Methods:** Data on age for all men accessing VMMC services between April and December 2018 was collected from MOH Minor Theatre Register from the two project-supported facilities in Turkana West (Kalobeyei Health Centre and Kakuma Mission Hospital). Data on men aged from 14 years and above was grouped by 5-year age categories and analyzed using Statistical Package for Social Science. Data was compared to population estimates from the Turkana County Integrated Development Plan (2013-2017). Community dialogue was conducted in primary villages of Letea and Oropoi with the aim of understanding community knowledge, attitudes and perceptions on VMMC and suggestions to increase uptake. A total of 123 (73% men) were identified, invited by area chief and engaged on an informal feedback session by health care professionals using a structured discussion guide to establish the community's understanding of, and perceptions about factors affecting uptake and suggestions on increasing uptake of VMMC services.

**Results:** Community shame, since VMMC is "against culture"; fear of the suspected superstitious uses of the removed foreskin that could cause 'infertility' in men; fear that practicing VMMC would cause mental illness; and inability to provide basic family needs during healing were identified as probable reasons for low uptake. To increase uptake of VMMC; continuous community sensitization to demystify myths about VMMC, linking VMMC to food distribution programs, and planning VMMC services around cash transfer calendars to ensure an uninterrupted healing process were suggested.

**Conclusions and Recommendations:** Increasing uptake among men aged above 24 years remains a challenge. It would be important for Turkana County's Department of Health and partners to consider the suggestions emerging from these discussions in their programming for increased uptake of VMMC services in the county.

## FRPEC218

### **Voluntary Medical Male Circumcision (VMMC) Adolescent Counseling Materials and Training to Make VMMC More Adolescent-Friendly**

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**Issues:** Since VMMC was scaled up in VMMC priority countries, the majority of clients have been adolescents. A study analyzing the quality of VMMC counseling for adolescents determined the urgent need to ensure it was complete and adolescent-friendly, and that adolescents fully understood the benefits and risks of VMMC.

**Description:** Based on these findings, a training and counseling materials (cue cards and a guide to support group, post-operative, and HIV testing and counseling) were developed. The 3-day training was offered in January 2019 to 15 VMMC providers in 2 councils in Njombe, Tanzania and it was designed to build adolescent counseling skills. The training focused on how to provide sexual health and VMMC information to adolescents and it was framed following the principles of comprehensive sexual education. It was followed by 3 on-site mentoring visits during the field testing of the materials. An assessment after 3 months of implementation followed. Methods used included interviews with counselors and adolescent clients, observation of counseling sessions, and 40 exit surveys. Thematic analysis of the interview transcripts was conducted using MAXQDA. Themes were triangulated with observation and survey data.

**Lessons learned:** Adolescents reported being satisfied with the quality of the VMMC services. Counselors indicated that the training was very useful and that the follow up on-site mentorship was crucial. They suggested that a practicum immediately following the training be added. They said that the cue cards were useful but that sometimes they interrupted the conversation flow and requested flipcharts with youth-friendly illustrations. The interviews and observation revealed that while counselors were consistently covering sexual health information with older adolescents (15-19), counselors still had difficulty doing this, particularly with younger adolescents (10-14). The difficulty stemmed from cultural beliefs and fear that parents accompanying clients may object to the sexual health information provided. Counselors suggested that the condom demonstration be offered (as optional) during individual HIV testing counseling and not in the group counseling session.

**Next steps:** Sessions on overcoming values- and taboo-based barriers will be added to the training. The materials and training will be updated per the input received and they will be disseminated widely to support efforts to make VMMC services more adolescent-friendly.

## FRPEC219

### HIV Infections Averted by Voluntary Medical Male Circumcision (VMMC) Programs through 2018 and Expected Future Impact in Four Countries

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**Background:** VMMC reduces the probability of HIV acquisition by about 60%. As a result, programs have been implemented in 15 countries in sub-Saharan Africa. By the end of 2018, 22.6 million men and boys had received VMMC. We used mathematical modeling to estimate the impact of these programs on new HIV infections in Kenya, South Africa, Zambia and Zimbabwe.

**Methods:** We estimated HIV infections averted by VMMC scale-up by applying four mathematical dynamic transmission models: Goals (Avenir Health), ICL (Imperial College London), EMOD (Institute for Disease Modeling) and Thembisa (University of Cape Town). The models were fitted to surveillance and survey data in each country. Historical VMMC scale-up was based on program reports of numbers of VMMCs conducted by year, age and sub-national region. We applied different models to the same data sets in order to validate the results and understand the uncertainty associated with model structures and calibrations. We used the models to estimate the impact achieved by the circumcisions already conducted and the impact of continuing scale-up to achieve national program targets, under different assumptions about trends in background incidence.

**Results:** In these four countries, nearly 10 million VMMCs were conducted between 2008-2018. This has already averted 100,000-150,000 new infections from 2008 to 2018. Including the future impact of VMMCs already conducted increases the impact to 770,000-920,000 infections averted from 2008 to 2030. The number of VMMCs required to avert one infection drops from 80 when evaluated in 2018 to less than 10 when the full time period of protection is included at a cost of just \$1200-\$1400 per infection averted. The impact would be less if background incidence were reduced due to scale-up of other prevention interventions, but even then VMMC makes an important contribution. VMMC is relatively inexpensive, as it is a one-time intervention offering lifelong protection. We estimate that savings from future treatments avoided will exceed the cumulative investment costs of the VMMC program by 2026-2035.

**Conclusions:** VMMC programs have already averted substantial numbers of new infections, and this impact will grow 4-8-fold within the coming three decades. Achieving national service output targets of national VMMC programs will avert twice as many new infections by 2030. National programs should continue strong efforts to achieve their VMMC coverage goals.

## FRPEC220

### Impact of Tetanus Vaccine to Scale up of Voluntary Male Medical Circumcision in Rwanda

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**Background:** Rwanda was among the first countries in Africa to integrate the Voluntary medical male circumcision (VMMC) in the HIV national program since 2009 to reduce the rate of HIV acquisition in men. Initially, conventional surgical was the only method used until the Prepex device method launched in late 2013. Prepex was tested to be effective in scaling the VMMC program in low resources limited settings. Both methods proven to increase considerably the uptake of male circumcision in Rwandan community from 13% to 30% in 2015. After experiencing cases of tetanus, WHO and national amended the guidelines by introducing two Anti tetanus vaccines before to any circumcision procedure. This has impacted the uptake of the program as it requires at least 4weeks prior to use of prepex. This analysis aims to assess the impact of enforcement of vaccine to the increase of VMMC coverage and choice of method

**Methods:** We analyzed aggregated data from routine program reported through Rwanda health information system (RHMIS) for the period between 2015 to 2018. We compared outcomes of the two methods before and after introducing tetanus vaccine. In addition to the change of required number of vaccine dose prior to the procedure, we estimated the change in number of clients using any of the method and we performed proportional statistical test. The bootstrap was used to estimate standard error with thousand replicates

**Results:** Introduction of prepex reduced 13% of surgical procedures from 2015 to 2016 while prepex procedure quadrupled in 2017 (from: 1.98-4.13). The introduction of two dose of tetanus in 2017, the client's preference of prepex declined about 2 folds (from:4.13-2.91). The preference of surgical procedures increased about 2 folds (from: 1.54, 2.15).

**Conclusions and Recommendations:** The number of tetanus vaccines is associated with the preference of MC methods. While male circumcision has been proven to be effective in prevention of HIV transmission. Implementation of mix methods for MC service delivery contributed to the doubling of the MC prevalence within the last 5 years. Optimizing its safety has been achieved by introduction of Anti tetanus vaccine. However, the use of the tetanus vaccine has reported to slow the rate of MC update. Alternatives methods like Shang Ring devices use to maximize the circumcision scale up while optimizing safety are welcomed in Rwandan context

## FRPEC221

### Reaching Adolescent Boys and Young Men through a Voluntary Male Medical Circumcision Program in Zambézia Province, Mozambique

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**Issues:** Voluntary male medical circumcision (VMMC) is a high-impact, biomedical HIV prevention method that can reduce the risk of acquiring HIV from a female sex partner by 60%. While VMMC can reduce HIV incidence, adolescent boys are often not connected to the health system so specific community-level demand creation strategies are needed. Since 2013, ICAP at Columbia University in partnership with the Mozambique Ministry of Health (MOH) has been implementing a VMMC program in Zambézia province that is focused on adolescents.

**Descriptions:** To reach adolescent boys aged 15-19 years, an age-specific demand generation strategy was introduced and included educational sessions at schools, churches, and workplaces. Health educators were trained in adolescent communication and conducted education sessions using a question-and-answer approach. VMMC-branded soccer tournaments were organized where health communication experts used interactive educational tools to explain the benefits of VMMC and local musicians performed songs about HIV prevention and the benefits of circumcision during halftime. In addition, adolescent community mobilizers provided transportation at events or during school breaks to and from health clinics or temporary VMMC service sites for adolescent clients and their parents or caregivers. We report routinely reported aggregate data describing the ages of VMMC clients and compare the proportion of adolescent clients among all VMMC clients in the first year of the program to the most recent year using Chi-square tests.

**Lessons learned:** Between March 2013 and May 2019, VMMC services were provided to 272,439 clients; 101,531 (37%) were 10-14 years; 95,450 (35%) 15-19 years; 61,089 (22%) 20-29 years, and; 14,369 (5%) 30 years and above. The proportion of clients age 15-19 increased from 30% in the first year of the program (March 2013-February 2014) to 39% from June 2018-May 2019 (95% CI: 1.4, 1.5).

**Next steps:** Mozambique's VMMC program successfully reached adolescent boys, with the 15-19 year old age group currently accounting for 39% of all medical circumcisions. Efforts that focus on demand creation can be effective for increasing VMMC in this age group.

## FRPEC222

### Age-specific Risk of Severe Adverse Events during Voluntary Medical Male Circumcision (VMMC) - Sub-Saharan Africa, 2015-June 2018

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**Background:** Male circumcision (MC) confers partial lifelong protection against heterosexually-acquired HIV infection among men. PEPFAR has supported >18 million voluntary medical male circumcisions (VMMCs) for males  $\geq 10$  years-old (yo) in 15 African countries. Although VMMC is generally considered a low-risk procedure, severe adverse events (AEs) can rarely occur. Understanding age-related AE risk is important to guide mitigation strategies and age-appropriate counseling.

**Methods:** PEPFAR conducts passive surveillance of select severe AEs occurring in supported VMMC programs, including death, tetanus, glans injury (GI), or any AE leading to hospitalization  $\geq 3$  days or likely permanent deformity or disability. Although reporting is mandatory, compliance is not known. AEs are investigated through medical record review and interviews, and data is reported on standard form. We reviewed AE data reported from 2015 to June 2018, and categorized each AE as infection, tetanus, bleeding, GI, fistula, and other type. Age was dichotomized to 10-14yo and  $\geq 15$ yo. We used data on the total number of MCs performed during this time period to calculate the prevalence and prevalence ratio (PR) by age group.

**Results:** A total of 216 AEs were reported to PEPFAR during 2015-June 2018, with 197 (91%) related to MC (1.7 per 100,000 VMMCs). AE prevalence was greater among males 10-14yo compared to  $\geq 15$ yo (2.1 vs. 1.3 per 100,000 MCs, PR=1.6 [95% CI = 1.2-2.1]). Infections were the most common AE in both age groups (0.6 per 100,000 MCs in both groups). GIs were exclusively reported among males 10-14yo, and fistulas nearly exclusively reported in this group. Excluding GIs and fistulas from the PR calculation resulted in a no significant difference between age groups (PR=0.99 [95% CI = 0.7-1.4]).

**Conclusions:** Severe AEs are rare during MC but more commonly occur among males 10-14yo than males  $\geq 15$ yo. This higher AE risk likely reflects an increased likelihood of injuring a smaller, sexually immature penis during MC. The greater risk of GIs and fistulas in this age group should be weighed against the benefit of offering these males with high VMMC demand a procedure that offers partial protection from HIV for life. PEPFAR and ministries of health have taken numerous steps to eliminate GIs, but fistulas may be more difficult to prevent because of the multifactorial etiology. The risk of these AEs should be conveyed during patient and parental (for minors) counseling and informed consent.



## FRPEC223

### HIV Testing Services (HTS) Yield among Voluntary Medical Male Circumcision (VMMC) Clients in CDC-supported VMMC Programs, October 2018-March 2019

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**Background:** As the number of persons with undiagnosed HIV infection diminishes in countries with generalized epidemics, governments and donor agencies are increasingly emphasizing higher-yield (HIV positive tests/total HIV tests) HIV testing services (HTS) strategies like index case testing and testing in TB clinics). HTS in voluntary medical male circumcision (VMMC) clients has historically been among the lowest-yielding testing strategies, likely reflecting the predominance of younger men (who are at relatively low risk of HIV) taking up this service. We assessed the yield by age of VMMC clients to determine if a shift from routine HTS for younger VMMC clients is supported by programmatic data.

**Methods:** CDC supports VMMC among men  $\geq 10$  years in 12 African countries: Botswana, Ethiopia, Kenya, Malawi, Mozambique, Namibia, Rwanda, South Africa, Tanzania, Uganda, Zambia, Zimbabwe. Implementing partners report aggregate VMMC data to CDC quarterly, including HTS results of men testing at VMMC sites. We analyzed HTS yield by 10-year age groups by country from October 2018-March 2019. We also analyzed the proportion HIV-positive HTS results by age group.

**Results:** In total, 945,445 men underwent VMMC in CDC-supported programs during October 2018-March 2019. Overall HTS uptake was 81% (range: 15.2% [Kenya] - 100.0% [Zimbabwe]), with a yield of 0.7% (range: 0.0% [Rwanda] - 2.4% [Mozambique]). Overall HTS yield increased with age, from 0.3% in 10-19 year-old to 4.2% in  $\geq 50$  year-olds, peaking at 4.5% among 40-49 year-olds. Individual countries followed the same pattern; however, the age group with the highest yield varied in some countries. In all countries, the yield among 10-19 year-olds was  $< 1.0\%$ . While men aged 10-19 years comprised 70% of VMMC clients, they represented only 31% of HIV-positive HTS results.

**Conclusions:** HTS yield is very low among VMMC clients, particularly those aged 10-19 years; routinely testing this age group should be reconsidered. However, no person who requests HTS should be denied it. Although only testing men aged  $\geq 20$  years would identify the majority of HIV-positive VMMC clients, even here the HTS yield in many countries is lower than other modalities. Clinical screening tools to identify higher-risk men to undergo HTS during VMMC (which is current PEPFAR guidance) could also reduce low yield testing, streamline VMMC service delivery by removing this often lengthy step from the pre-procedure process, and optimize resource utilization.