



# Reviews

in Antiviral Therapy  
INFECTIOUS DISEASES

8  
2020

JOURNAL OF ABSTRACTS AND CONFERENCE REPORTS FROM INTERNATIONAL WORKSHOPS ON INFECTIOUS DISEASES & ANTIVIRAL THERAPY

## **Abstract Book**

4th International Workshop on HIV & Adolescence

*Building Health and Resilience*

*November 2020, virtual meeting*

# **International Workshop on HIV & Adolescence - 2020**

*Building Health and Resilience*

**Abstracts  
Oral Presentations**



## 1

# KNOWLEDGE, ATTITUDES AND PRACTICES OF CONTRACEPTIVE USE AMONG STUDENTS IN SELECTED UNIVERSITIES IN ZIMBABWE: 2019

Marimirofa M<sup>1</sup>, Murwira M<sup>1</sup>, Zwangobani N<sup>1</sup>, Machinga F<sup>1</sup>, Zvoushe A<sup>1</sup>, Machimbirike H<sup>1</sup>

<sup>1</sup>Zimbabwe National Family Planning Council, Harare, Zimbabwe

**Background:** Uptake of contraceptives among youth in Zimbabwe is 12% and 49% among the 15-19 year and 20-24 year age groups while unmet need for family planning among the same remains high at 13% (15-19 years) and 10% (20-24 years). Unintended pregnancies are a major public health issue among students in tertiary institutions and documentation on knowledge, attitudes and practices on contraceptive use among young people in tertiary institutions is limited.

**Objective:** The study aimed to determine the knowledge, attitudes and practices on contraceptive use among young people in selected universities in Zimbabwe.

**Methods:** A cross sectional study was conducted at the University of Zimbabwe, National University of Science and Technology, Chinhoyi University of Technology and Midlands State University which were purposively selected. Data was collected from 537 female students aged 18-24 years using structured questionnaires. Twenty (20) key informants were interviewed, 15 Focus Group discussions for females and males were conducted. Data was analysed using SPSS and STATA.

**Results:** Ninety five percent of the respondents were never married. The median age was 21 years and median age at first intercourse was 20 years. Fifty seven (57%) of the female students interviewed were sexually active and sexual experience increased with age from 18% among 18-19 years to 63% among the 22-24 years. The pill was the most common contraceptive (85%) method known by the students. Three (3%) indicated that traditional methods prevent STIs and pregnancy while 67% reported that contraceptive users are responsible with 30% viewing them as promiscuous. Fifty two (52%) of the sexually active were using the Emergency Contraceptive and 66% were using contraception for spacing. Accessibility, affordability, social norms and religion were listed as obstacles affecting uptake of FP services among young people in tertiary institutions.

**Recommendations/Conclusion:** Knowledge and awareness do not always translate to uptake of contraceptives. There is need to motivate young people for effective and appropriate use of contraceptives and strengthen referral links between tertiary institution clinics and other service providers to increase contraceptive use. Advocacy on the benefits of family planning services to reduce associated myths and misconceptions is essential.

## 2

## RISK OF HIV INFECTION IN YOUNG PERIPARTUM WOMEN (15 – 24 YEARS) AT TYGERBERG HOSPITAL

Nyamathe S<sup>1</sup>

<sup>1</sup>Hope Cape Town, Cape Town, South Africa, <sup>2</sup>Tygerberg Hospital, Cape Town, South Africa

**Background:** Adolescent girls and young women (AGYW) in the age group 15 – 24 years old contribute a quarter of all new HIV infections in South Africa. In 2017, this age group had the highest annual incidence of HIV; 1.51 % according to the Fifth South African National HIV Prevalence, Incidence, Behavior and Communication Survey.

Our study looks at risk of HIV infection using a risk assessment tool developed through review of the literature on similar studies assessing risk factors of HIV infection particularly in AGYW. The aim of this risk score is to determine what proportion of the young women who attend antenatal care or give birth at Tygerberg Hospital could potentially be at risk for HIV infection.

HIV uninfected women aged 15 -24 years old were interviewed using a questionnaire and a risk assessment tool. A risk score was calculated using the tool to assess the risk of women being HIV infected in the next year.

**Results:** Data was analyzed for 235 of the 370 women interviewed for the study due to completeness of the data within the questionnaires.

Based on the risk score, 142 of 235 [60% (95% CI: 54 - 67%)] of the women were at high risk of HIV infection in the next year and the estimate was comparable to that obtained using the modified risk score, 135 of 235 [57% (95% CI: 51 - 64%)].

Protective factors included higher level of education, employment status and circumcision of male partners.

Risk factors included early age of sexual debut, no condom use, awareness of partner HIV status, transactional sex and age-disparate relationships.

**Recommendations/Conclusion:** Although the risk tool studied did not show statistically significant predictive ability for HIV infection, the tool still aids in driving tailored interventions for this vulnerable population. The women interviewed in this population display risk characteristics for future HIV infection.

From our study, we hope to inform and work with programs involved with adolescent girls and young women within this population to influence the exposure of young women to the protective and risk factors which lead to HIV infection.

## 3

## Contextual considerations to guide HIV prevention cascade optimization for urban refugee and displaced adolescents and youth in Kampala, Uganda

Logie C<sup>1</sup>, Okumu M<sup>2</sup>, Hakiza R<sup>3</sup>, Mwima S<sup>4</sup>, Kacholia V<sup>1</sup>, Kyambadde P<sup>5</sup>

<sup>1</sup>University Of Toronto, Toronto, Canada, <sup>2</sup>University of North Carolina, Chapel Hill, Chapel Hill, US, <sup>3</sup>YARID, Kampala, Uganda, <sup>4</sup>Ministry of Health, Kampala, Uganda, <sup>5</sup>Mulago Hospital, Kampala, Uganda

**Background:** There is a scarcity of youth-focused HIV prevention programs in humanitarian contexts, particularly in urban regions. This is a critical knowledge gap, as half of all refugees are under 18 years old and live in urban contexts. Most (60%) of Uganda's 1.3 million refugees are less than 18 years. Social contextual approaches explore social environments that shape agency over health and wellbeing. Informed by this framing, we explored perspectives toward the HIV prevention cascade among urban refugee and displaced youth in Kampala, Uganda.

**Methods:** This qualitative study with urban refugee/displaced youth (aged 16-24) in five of Kampala's informal settlements (Kabalagala, Rubaga, Kansanga, Katwe, Nsambya) involved five focus groups. These were conducted with refugee/displaced: men (n=1: ages 16-19; n=1: ages 20-24), women (n=1: ages 16-19; n=1: ages 20-24), and women sex workers (n=1: ages 16-24). We conducted in-depth interviews with five key informants experienced working in humanitarian agencies, refugee agencies, and refugee-inclusive HIV service delivery. Data were analyzed using thematic analysis informed by a contextual perspective.

**Findings:** Participants (n=44; mean age: 20.25, SD: 2.19; men: n=17; women: n=27) were from the Democratic Republic of Congo (n=29), Rwanda (n=11), Burundi (n=3), and Sudan (n=1). Participant narratives reflected contextual considerations that shaped access to, and uptake of, HIV prevention services, including HIV testing. Symbolic contexts, referring to larger socio-cultural norms and values, included sexual and gender-based violence, intersectional stigma (based on age, refugee status, sex work, and HIV), and religious and community norms that influenced HIV prevention engagement. Relational contexts, inclusive of social capital and relationships, included partner communication and trust, and support from family, friends and other peers. Material contexts, encompassing resource access and opportunities, included literacy, language, transportation, housing density, HIV education needs, and healthcare barriers and facilitators, including trust and confidentiality concerns.

**Conclusions:** The convergence of intersectional stigma, inequitable gender norms, and economic insecurity produced barriers to HIV prevention cascade engagement, suggesting the salience of a contextual approach to understanding interlocking social and health disparities. These results further suggest the importance of trauma-informed care to inform the implementation of HIV prevention services to optimize outcomes among urban refugee youth.

## 4

## A primary care level algorithm increases yield of HIV positive adolescents in a community intervention: HPTN071 (PopART) Study, Zambia

Chaila M<sup>1,2</sup>, Macleod D<sup>3</sup>, Schaap A<sup>1,3</sup>, Floyd S<sup>3</sup>, Thornicroft M<sup>1</sup>, Hoddinott G<sup>5</sup>, Hayes R<sup>3</sup>, Fidler S<sup>4</sup>, Ayles H, Shanaube K<sup>1</sup>

<sup>1</sup>Zambart, Lusaka, Zambia, <sup>2</sup>Catholic Relief Services, Lusaka, Zambia, <sup>3</sup>London School of Hygiene and Tropical Medicine, London, United Kingdom, <sup>4</sup>Imperial College London, London, Zambia, <sup>5</sup>Desmond Tutu TB Centre, Department of Paediatrics and Child Health, Faculty of Medicine and Health Sciences, Stellenbosch University, Cape Town, South Africa

**Background:** The PopART for Youth (P-ART-Y) study aims to evaluate the acceptability and uptake of a community-level combination HIV prevention package, including universal HIV testing and treatment, among young people aged 10-24 years. The study is nested within the HPTN071/PopART trial, a 3-arm community randomized study in 21 urban communities in Zambia and South Africa. The package is delivered through a door-to-door approach by Community HIV-care Providers (CHiPs). HIV prevalence is relatively low among 10-14 year olds, hence to prioritise HCT, a screening tool was used to try to identify those at relatively high risk of being HIV-infected.

**Method:** Adolescents contacted in their homes were offered participation in the PopART intervention. Data were recorded electronically by the CHiPs during household visits. For those aged 10-14 years old, a screening tool developed and validated elsewhere was used to identify those with a relatively high risk of being HIV-positive. Screening questions used were history of hospital admission; recurring skin problems; poor health in the last 3 months; and death of one or both natural parents. A “yes” response to  $\geq 1$  question was considered as an HIV infection suspect (“at risk”). We present findings from the second annual round of the PopART intervention in Zambia for the period, October 2015-August 2016.

**Results:** A total of 32,220 adolescents aged 10-14 years old were enumerated; 56.0% (n=18,040) participated in the intervention and had their health data recorded. Of those 12.1% (n=2,181) were “at risk”. In the at risk group, 4.4% (96/2,181) self-reported as HIV+ compared with 0.5% (74/15,859) in the not at risk group. Among those who did not self-report HIV+, uptake of testing was 69.5% (1,449/2,085) and 49.1% (7,755/15,785) in the “at risk” and “not at risk” groups respectively. HIV prevalence among those tested was 2.4% (35/2,085) in the at risk group, compared with 0.6% (44/7,755) in the not at risk group.

**Conclusion:** The screening tool identified adolescents in the general population who are at relatively high risk of being HIV-infected, this can be exploited to allow the offer of HCT to be targeted to those “at risk” in resource limited settings.

## 5

## The association between HIV-status disclosure and stigma experiences among adolescents living with HIV in South Africa

Saal W<sup>1</sup>, Toska E<sup>1,2</sup>, Pantelic M<sup>2,3</sup>, Roberts K<sup>4</sup>, Shenderovich Y<sup>2</sup>, Cluver L<sup>2,5</sup>

<sup>1</sup>Centre for Social Science Research, University Of Cape Town, , South Africa, <sup>2</sup>Department of Social Policy and Intervention, University of Oxford, , United Kingdom, <sup>3</sup>Brighton and Sussex Medical School, University of Sussex, , United Kingdom, <sup>4</sup>Institute for Global Health, University of Oxford, , United Kingdom, <sup>5</sup>Department of Psychiatry and Mental Health, University of Cape Town, , South Africa

**Background:** Adolescents living with HIV (ALHIV) experience worse morbidity and mortality than their peers. Qualitative research suggests that disclosure of HIV-positive status may be associated with stigma, which - in turn - shapes the health practices of adolescents living with HIV, especially adolescent girls and young women. This analysis tested whether disclosure of HIV-positive status in sexual or romantic relationships and knowledge of partner's HIV status were associated with stigma.

**Methods:** In this cross-sectional study, we interviewed 764 adolescent girls and young women living with HIV who were aware of their HIV status. Ethical approvals were obtained from Universities of Oxford, Cape Town and Departments of Health and Education. Univariate analyses were used to explore associations between HIV-related stigma (internalised, externalised and perceived) and HIV-status disclosure (sharing own HIV-positive status with family, peers and partner(s), and knowing partner's HIV status) in STATA16. We then conducted multivariate regression analyses exploring the associations between different types of HIV status disclosure and HIV-related stigma experiences controlling for covariates (age, rural residence, informal housing, poverty, hunger, and orphanhood).

**Results:** Only one in five (20%) of AGYW who knew their own HIV-positive status disclosed their HIV status to their partners. Just over one in five (21.8%) knew their partner's status and among those 11.8% indicated that their partner had HIV (sero-concordant relationships). The most prevalent type of stigma experienced by adolescent girls and young women living with HIV was perceived stigma (21.1%), followed by internalised stigma (16.6%) and discrimination/ externalised stigma (4.2%). Participants who disclosed their HIV-positive status to their peers were more likely to report perceived stigma (OR=1.75, 95%CI=1.11-2.77, p=0.016). Participants who knew their partner's HIV status – whether positive or negative – were also more likely to report perceived stigma (OR=1.79, 95%CI=1.15-2.77, p=0.009).

**Discussion:** Among adolescent girls and young women living in HIV-endemic communities, disclosure and stigma may closely overlap with HIV risk and infection. Understanding these pathways better would inform psycho-social support interventions to ensure they can build safe relationships.



## 6

## Uptake and experience of HIV and Hepatitis C Virus testing among adolescents and young people who use drugs in Nigeria

Onwe E<sup>1</sup>

<sup>1</sup>Foundation for Better Health and Human Rights (FBHR), Abakaliki, Nigeria

**Background:** HIV and Viral hepatitis infections are a global public health challenge with highest prevalence among injection drug users (IDUs). Continuous testing of IDUs for HIV and hepatitis C virus (HCV) provides useful information on the progress of hepatitis prevention and increases opportunities for treatment assessment, however little is known about the experience of HIV and hepatitis testing by IDUs. This study purpose is to evaluate the uptake and experiences of testing among adolescents and young people (AYP) who use and inject drugs in Nigeria.

**Methods:** The study was conducted between April and October 2019 among 1200 IDUs in Ibadan, Nigeria. Participants were selected through respondent-driven sampling and interviewed using a standard questionnaire about their experience in HIV and HCV testing. Data was analyzed using SPSS 23.0. Descriptive statistics were calculated and presented as frequencies and percentages.

**Results:** A total of 1200 study participants within 14 – 19 years (12%) and 20 – 25 years (88%), 70% were male whereas 30% were female. 20% and 36% had previously tested for HCV and HIV respectively, while 80% and 64% haven't tested because of fear of being stigmatized. 85% of these participants preferred to test in facilities owned by nongovernmental organizations (NGOs) whereas 15% test in specialized clinics, this is because of increased stigma and discrimination in most clinics. Reasons for testing were to protect others (60%), blood/needle exposure (25%) and to receive early treatment (15%). 65% delayed testing because of fear results, while 35% had trouble keeping appointments. Only 20% reported that they would prefer test results to be delivered in person whereas 80% preferred their test results delivered to them by mail.

**Conclusion:** There is low uptake of HIV and HCV testing among adolescents IDUs in Nigeria, this is due to stigma and discrimination. Also, facilities owned by NGOs are the only suitable locations for stigma free testing in Nigeria.

## 7

## How Adolescents and Young People Living with HIV successfully tackled the issuing of expired Anti-Retroviral Treatment using Social Media #ourlivesmatter

AMAIZA C<sup>1</sup>

<sup>1</sup>Organization Of Young People Living With HIV(Y+ Kenya), NAIROBI, Kenya

**Background:** In Kenya, 185,000 adolescents and young people living with HIV require daily antiretroviral medication (ARVs) to live longer and healthier lives (Kenya AIDS Estimates Report). Y+ Kenya is an umbrella network addressing the challenges and issues of adolescents and young people living with HIV. From 2018 onwards, Y+ Kenya advocated to ensure ARVs being issued at health facilities are of standard and quality.

**What happened:** In September 2018, Y+ Kenya asked young people living with HIV in Kenya to check their ARV's expiry dates. 57 Responses were collected via Whatsapp, Twitter, Facebook and text message all Social Media avenues. Y+ Kenya found that young people living with HIV on Lopinavir are being issued expired medication. Y+ Kenya mobilized youth-led organizations and requested the National AIDS and STI Control Programme (NASCOP) via a letter to address the issue. This was not taken up. In March 2019, Y+ Kenya took it to Twitter and asked NASCOP to address this matter. For 8 working hours young people living with HIV trended on Twitter under the #OurLivesMatter. We managed to attract over 123,000 impressions.

**Results:** NASCOP invited Y+ Kenya for a dialogue with seven high ranking officials. Seven adolescents and young people living with HIV stood their ground agreeing that young people need to be at the forefront of getting virally suppressed. The officials issued notice to all health care facilities asking them to recheck the expiry of Lopinavir. Young people living with HIV were to be changed to available options as recommended in the National Care and Treatment Guidelines. The officials commended Y+ Kenya for addressing these faults in the systems. They committed to respond to young people's issues with urgency.

**Lesson learnt:** Social media are a powerful tool as its impact can be used to effect change. New technology It has enabled the quick and easy measuring and connection, contributing to a tangible change. In future it is important that first communities develop accountability mechanisms to ensure governments provide quality commodities and secondly that treatment literacy is provided to end users of any available treatment regimen.

## 8

## Youth in an Intersectional Advocacy Effort against The Indonesian Penal Code Revision that Violates Sexual and Reproductive Rights

*Sabur B1*

*1Aliansi Remaja Independen, Central Jakarta, Indonesia*

**Background:** The Indonesian penal code is a legacy from the colonial era, with revision underway for decades. The National Alliance for reforming the penal code, with ARI (a youth-led organization) in it, has been at work for over a decade. Indonesian conservatism has dominated recent discussions, with plans to ban all abortion, restrict contraceptive information dissemination, and criminalize premarital sex, as well as other non-SRHR issues (corruption, environment, etc), despite inputs from the Alliance. In response, an intersectional advocacy is implemented, bringing support from other fields, to delay the revision to the next government.

**Methods:** A coalition is formed with other alliances intersecting with the penal code (anti-corruption activists, gender activists climate activists, etc). Alliances are built not just in the capital. Youth took part in various regions and participated in forming the coalition's 7 demands, ensuring inclusivity. Consistent protests with the 7 demands were done everywhere. For the penal code, the online campaign targeting various problematic articles was made youth friendly, raising awareness regarding specific issues.

**Results:** The coalition took off, with even high school students joining protests. The political pressure from these protests was able to delay the penal code revision to the next government. The government themselves have promised to listen to more input from the public. The online campaign was able to help the public identify the specific problems, including the SRHR articles. This resulted in an online discourse regarding the law and SRHR. More young people are now also aware of the political process in policy making and their sexual and reproductive rights.

**Conclusions:** This inclusive intersectional advocacy was able to delay the revision. The coalition built will be able to rally more support in the future to advance various human rights issues. The coalition continues public engagement to continue the public advocacy. For the revision, active lobbying to the new government will be needed to address the issues, including the problematic SRHR articles. More aware and engaged youth also means that more youth are aware of their rights and how to engage in decision making.

9

## Acceptability of long-acting injectable antiretroviral therapy among AYLHIV in South Africa: the missing link for reaching the 3rd 90?

Toska E<sup>1,2</sup>, Chen J<sup>2</sup>, Zhou S<sup>1</sup>

<sup>1</sup>University Of Cape Town, Cape Town 7700, South Africa, <sup>2</sup>University of Oxford, Oxford, United Kingdom

**Background:** The health and well-being of several million adolescents and young people living with HIV (AYLHIV) in sub-Saharan Africa is dependent on the daily oral administration of life-long antiretroviral therapy (ART). However, poor adherence to these regimens among AYLHIV threatens their long-term treatment outcomes. Long-acting injectable ART (LAART) may improve adherence to ART leading to extended opportunities for AYLHIV survival and health. However, research on the acceptability of LAART for this unique age-group is limited.

**Material and Methods:** 1,010 AYLHIV who took part in the final wave (95.2% acceptance, 1.9% refusals, 2.9% untraceable) of the Mzantsi Wakho study in 2017-2018 were asked about their preferred ART mode of delivery (pill, injectable, implant, and vaginal ring). Standardised questionnaires with locally-validated scales – where available – were used. Voluntary informed consent was given by participants >18 years old, with caregiver consent provided for those <18 years. Multivariate logistic regression analyses were used to examine factors associated with preferences for LAART compared to single or multiple-pill regimens among 947 adolescents (63 participants who noted preference for an implant and vaginal ring were excluded from this analysis).

**Results:** One in eight (12%) of AYLHIV would prefer to take their ART through monthly or 3-monthly injectable regimens. Four factors were associated for preference for injectable LAART among AYLHIV: past-week oral ART non-adherence (aOR=1.93 95%CI 1.25-2.99 p=0.003), experiencing side-effects (aOR=1.94 95%CI 1.24-3.06 p=0.004), ART initiation in the past 2 years (aOR=1.78 95%CI 1.02-3.10 p=0.043), and changing medication in the past year (aOR=1.61 95%CI 1.07-2.41 p=0.021). No associations were found with age, gender, mode of HIV-infection, rural residence, informal housing, and poverty. In marginal effect modelling, 7% of AYLHIV who did not report any of these factors were likely to prefer injectable LAART compared with nearly one in two (44%) of AYLHIV who reported all four factors.

**Conclusions:** Injectable LAART could be a highly acceptable treatment option with the potential to enable better adherence among AYLHIV. Adding injectable LAART to the existing treatment options for adolescents and young people would ensure that AYLHIV at greatest risk of not meeting the last 90 (viral suppression) are able to do so.

10

## PrEP uptake among AGYW enrolled under the DREAMS programme in Zimbabwe

*Dhakwa D<sup>1</sup>, Mudzengerere F<sup>1</sup>, Mundingi R<sup>1</sup>, Nyagura T<sup>2</sup>, Mafaune H<sup>1</sup>, Ncube G<sup>3</sup>, Ncube B<sup>1</sup>, Mudokwani F<sup>1</sup>, Pfupajena M<sup>1</sup>, Harbick D<sup>1</sup>, Zulu T<sup>1</sup>, Tafuma T<sup>1</sup>*

*<sup>1</sup>FHI360, Harare, Zimbabwe, <sup>2</sup>USAID Zimbabwe Mission, Harare, Zimbabwe, <sup>3</sup>MOHCC Zimbabwe, Harare, Zimbabwe*

**Background:** Pre-exposure prophylaxis (PrEP) provides protection from contracting human immunodeficiency virus (HIV) infection among sexually active persons. Adolescents girls and young women (AGYW) are at higher risk of contracting HIV as compared to elderly women and male counterparts as they cannot negotiate for safe sex. To achieve epidemic control, FHI360 Zimbabwe is implementing the Determined, Resilient, Empowered, AIDS-free, Mentored and Safe Women (DREAMS) programme in six supported districts. The DREAMS programmes aim at empowering AGYW adopt healthy lifestyle practices that reduce new HIV infection and promote healthy living. Access to PrEP is among the interventions accessed by the AGYW. We present PrEP uptake among AGYW enrolled in the DREAMS programme in Zimbabwe.

**Methods:** This was a cross sectional study of AGYW aged 15-19 years selected from Bulawayo, Gweru, Mazowe and Chipinge districts in Zimbabwe. A mixed method approach was used through the routine site sentinel monitoring to track progress of DREAMS indicators. Primary data was collected through in-depth interviews using computer assisted personal interviewing (CAPI). Structured questionnaires were uploaded into a mobile based data collection platform (KOBOToolbox). Data was analysed using SPSS version 22.

**Results:** Over a half, 56.8%(441/776) of the adolescents assessed had knowledge about PrEP and the service providers. A small proportion, 6.6%(51/776) had accessed PrEP within the last 6 months from the time for assessment and of these, 68.6%(35/51) were single, 17.6%(9/51) married and 13.7%(7/51) divorced.

The assessment found out that over half of the adolescents, 55%(28/51) were satisfied with using PrEP. Barrier for PrEP uptake cited by the adolescents were failure to get permission from sexual partner as a third, 31.4%(16/51) sought consent. Some of the adolescents indicated they lacked knowledge and were not yet decided on taking PrEP.

**Conclusion:** PrEP uptake was low among the AGYW who showed some level of risk and vulnerability at enrolment into the DREAMS programme. Scaling up PrEP uptake to all districts could improve prevention of contracting HIV among the AGYW enrolled in the DREAMS programme in Zimbabwe.

## 11

## High HIV prevalence amongst adolescent boys who have sex with other men in Delta State, Nigeria.

*Rashidi W1*

*1Equality Triangle, Warri, Nigeria*

**Background:** Men who have sex with men (MSM) in Nigeria are disproportionately affected by the HIV epidemic. Recently, there has been an increase in HIV testing and treatment services tailored towards MSM in Delta State, Nigeria. The current study aimed to evaluate HIV prevalence among adolescent (ages 15-19 years) MSM in Delta State, Nigeria in addition to recommending improvement in HIV prevention, treatment and STI syndromic management and treatment for adolescents.

**Methods:** Between January-July 2020, a total of 1,528 MSM, aged between 15-24 years, living in the Delta central senatorial zone of Delta state Nigeria were engaged in HIV testing services via different avenues including field testing, index partner referral, social networks and client accompanied referral. All eligible participants were offered HIV testing and counseling. All participants with a reactive test result were initiated into treatment within 48hours of confirmatory HIV testing. We assessed the frequency of all variables by HIV positivity.

**Results:** 15-19 years accounted for 26..4%; 73.6% (20-24); Of 1,528 HIV tests conducted, 296 were reactive aged 15-19 and 827 were positive aged 20-24. The estimated HIV prevalence per age group was 73.4% (15-19); 73.5% (20-24). Of those aged 15-19, 15% presented with genital warts and 72% identified as being the receptive anal partner in their sexual encounters.

**Conclusions:** With odd ratios at 1.00, there is no difference in the exposure between the two groups. However, adolescent gay and bisexual are more have a higher chance of becoming infected when factors such as condom use negotiations is considered. Factors such as unavailability and inaccessibility of friendly and comprehensive sexuality education when factored in could also increase exposure. Adolescents who identify as gays, bisexuals need to be provided with services that are young people friendly. Such service should address mental wellness as part response to coming to terms with HIV positivity. Sub-population-based programming is also an imperative for improved prevention and treatment for adolescents.

12

## Using a quality improvement process to improve viral load testing coverage among children, adolescent and young people living with HIV

Sellberg A<sup>1</sup>, Willis N<sup>1</sup>, Malaba R<sup>2</sup>, Khabo B<sup>3</sup>, Mtewuki L<sup>2</sup>, Matyanga P<sup>1</sup>, Chamoko S<sup>1</sup>, Napei T<sup>1</sup>

<sup>1</sup>Africaid, Harare, Zimbabwe, <sup>2</sup>Zim-TTECH, Harare, Zimbabwe, <sup>3</sup>Ministry of Health and Child Care, Harare, Zimbabwe

**Background:** Viral load (VL) monitoring is the cornerstone of HIV management. The Zvandiri model responds to the specific needs of Children, Adolescents and Young People living with HIV (CAYPLHIV) and their families so as to ensure the prevention and control of HIV through the Community Adolescent Treatment Supporter (CATS) intervention. Program data from 2019 identified that VL coverage for CAYPLHIV was less than 20% in some districts while others performed well with over 90%. It is important to identify and address bottlenecks to program performance while scaling up best practices.

**Methods:** Using a QI approach, a deep dive analysis was conducted with facility, ZVANDIRI, ministry of health and other stakeholders at 7 health facilities that had varying performance to identify the factors associated with good or poor VL management. Data were collected through in-depth individual interviews, desk reviews, focus group discussions, observations and on-site quantitative data abstraction. Thematic analysis was done on qualitative data while statistical analysis was done on quantitative data. Additionally, the best practices identified were used to initiate quality improvement initiatives in poor-performing sites so as to improve VL testing over a period of six weeks.

**Results:** Activities that are associated with good VL testing coverage in CAYPLHIV include continuous/regular VL performance review, provision of adolescent friendly services, setting up specific days and times for providing services for CAYPLHIV, use of flexible working arrangements, close collaboration between CATS, clinic staff, and lab staff to improve VL management, and close collaboration between community cadres to provide optimal community support to clients and caregivers.

VL testing coverage in the supported low performing sites improved from 65% to 82% within the six-week period, while the VL results coverage improved from 42% to 56%. The district teams had managed this improvement through line-listing CAYPLHIV due for VL bleeding, using the CATS to mobilise for VL bleeding, providing a nurse to bleed during "Saturday adolescent days", weekly performance review by QI teams, as well as direct follow up with the lab personal regarding VL results.

**Conclusions:** QI for CAYPLHIV programs is a pragmatic and effective approach for better program outcomes.

13

## Virological failure is consistent with acquired HIV drug resistance among vertically-infected adolescents: evidence from the EDCTP-READY study

**Njume D<sup>1,4</sup>**, Fokam J<sup>1,2,3</sup>, Pabo W<sup>1,5</sup>, Takou D<sup>1</sup>, Mbuagbaw L<sup>4</sup>, Santoro M<sup>6</sup>, Mpouel Bala M<sup>1,2</sup>, Tala V<sup>1,2</sup>, Chenwi C<sup>1,2</sup>, Beloumou G<sup>1</sup>, Djupsa S<sup>1</sup>, Semengue Ngoufack E<sup>1,6,7</sup>, Nka A<sup>1,6,7</sup>, Teto G<sup>1</sup>, Dambaya B<sup>1</sup>, Ateba F<sup>8</sup>, Koki Ndombo P<sup>2,8</sup>, Moyo Tetang Ndiang S<sup>9</sup>, Njom-Nlend A<sup>9</sup>, Colizzi V<sup>1,6,7</sup>, Federico Perno C<sup>1,6,10</sup>, Ndjolo A<sup>1,2</sup>

<sup>1</sup>'Chantal Biya' International Reference Centre For Research On Prevention And Management Of HIV/AIDS(CIRCB), Yaoundé, Cameroon,

<sup>2</sup>Faculty of Medicine and Biomedical Sciences, University of Yaoundé 1, Yaoundé, Cameroon, <sup>3</sup>National HIV Drug Resistance Group, Ministry of Public Health, Yaoundé, Cameroon, <sup>4</sup>Faculty of Health Sciences, University of Buea, Buea, Cameroon, <sup>5</sup>Faculty of Science, University of Buea, Buea, Cameroon, <sup>6</sup>University of Rome Tor Vergata, Rome, Italy, <sup>7</sup>Evangelic University of Cameroon, Bandjoun, Cameroon, <sup>8</sup>Mother and Child Centre of the 'Chantal BIYA' Foundation, Yaoundé, Cameroon, <sup>9</sup>National Social Welfare Hospital, Essos, Yaoundé, Cameroon, <sup>10</sup>University of Milan, Milan, Italy

**Background:** Despite global decrease in HIV-associated mortality due to increase antiretroviral therapy(ART) uptake, adolescents living with perinatal HIV infection(ALPHI) persistently experience high mortality rates; particularly those in Sub-Saharan Africa (SSA) (including Cameroon). We aimed to assess response to ART, acquired HIV Drug resistance (HIVDR) and its factors among ALPHI.

**Materials and Methods:** Cross-sectional study was conducted amongst consenting ALPHI in two reference urban paediatric centres and a reference laboratory (CIRCB), Yaoundé, Cameroon. WHO clinical staging, self-reported adherence, immunological status (CD4 count) and plasma viral load (PVL) were assessed. Cases of virological failure(VF:PVL>1000copies/ml) had genotypic resistance testing performed and drug resistance mutations interpreted with Stanford HIVdbv8.8. Seven early warning indicators (EWIs) for HIVDR were evaluated. Data were analysed with EpiInfo v7.2.2.6, using Chi-square/Fisher-exact test for categorical data and Student t test for quantitative data; with p<0.05.

**Results:** Of 196 ALPHI, 56.1%(110) were female, median age 16[IQR: 14-18] years, 61.7%(121) on non-nucleoside reverse transcriptase inhibitors (NNRTI)-based regimens and 30.1%(59) poorly adherent. Clinical failure rate (WHO-stage III/IV) was 9.2%. Median CD4 was 541 cells/mm<sup>3</sup>, immunological failure rate (CD4<250cells/mm<sup>3</sup>) was 15.8%; associated with late adolescence (OR=1.24 [1.03-1.50], p=0.02), female gender (p=0.04) and poor adherence (p=0.04). VF rate was 34.2% (67/196), associated with poor adherence (p=0.02) and NNRTI-based ART (p=0.02). HIVDR rate was 92.2%, higher with first-line ART (95.9% /OR=5.66[0.58-74.82]. 89.1% had NNRTI-DRMs, 78.1% NRTI-DRMs and 4.7% PI/r-DRMs; with 81.3% dual-class resistance. Using 70% efficacy threshold, most potent drugs were tenofovir (72.0%) for NRTI and all PI/r. 12 viral strains were found (76.5% recombinants/ 23.5% pure). Driving factors of HIVDR(EWI) were delayed drug pick-up (81.7%), drug stock outs (75%) and sub-optimal viral suppression (71.1%).

**Conclusion:** Immunological failure is consistent with poor adherence, late age and female adolescence. VF is high due to very high HIVDR rate, driven by poor adherence and low genetic barrier first-line ART use. TDF and PI/r appear highly active for managing ART failure. Thus, a successful transition of ALPHI to adult care requires: improving drug supply, enhancing adherence to ART, use of newer innovative drugs and early detection of therapeutic failure, targeting mainly female and late age adolescents receiving first-line ART.



14

## Reducing mother to child transmission among adolescent girls and young women (AGYW) in low-income and middle-income countries.

Ronan A<sup>1</sup>, Mbule M<sup>1</sup>, Hofmeyr C<sup>1</sup>, Igumbor J<sup>2</sup>, Schmitz K<sup>1</sup>

<sup>1</sup>mothers2mothers, Cape Town, South Africa, <sup>2</sup>University of the Witwatersrand, , South Africa

**Background:** Despite high antiretroviral therapy (ART) coverage, AGYW in sub-Saharan Africa experience lower uptake and inferior outcomes along the prevention of mother-to-child transmission of HIV (PMTCT) cascade, with a reported mother-to-child transmission (MTCT) rate three times higher than their adult counterparts. Early and sustained utilisation of PMTCT intervention is essential for success. This study describes service utilisation patterns among AGYW in an HIV peer support programme.

**Methods:** We conducted a retrospective secondary data analysis of a 36-month AGYW cohort supported by the mothers2mothers' (m2m) Mentor Mother Programme. A cluster random sampling design was used to select sites in Eswatini, Kenya, Lesotho, Malawi, South Africa and Uganda. All HIV-positive pregnant AGYW in the selected facilities who enrolled into the m2m programme between January and June 2016 and with follow-up until December 2018 were included in the analysis.

**Results:** A total of 2462 AGYW were included in the analysis. Twenty percent were aged <20 years at first antenatal care (ANC) booking ; 18% attended their first ANC booking during the first trimester while the majority (59%) attended during the second, and 24% during the third. Only 27% were on ART before pregnancy, the majority (63%) at first ANC booking and 10% during or after delivery. Final infant test uptake at 18-24 months was 90% with an MTCT rate of 2.9% and infant ART uptake of 83%.

**Conclusion:** Our findings show continued late entry to PMTCT services among AGYW which may imply that this group do not engage with sexual and reproductive health services (SRH) services before pregnancy. However, once identified and linked to care and treatment, the observed testing uptake, MTCT rate and ART uptake compare favourably with outcomes in sub-Saharan Africa which may suggest the positive impact of the m2m peer-based model on MTCT outcomes in this group. To maximize PMTCT outcomes for AGYW, there is an urgent need for innovative interventions that target this population before pregnancy and provide a supportive environment to increase access to and utilisation of comprehensive SRH services.

15

## Effect of a peer-led mental health intervention on virological suppression and mental health among adolescents living with HIV in Zimbabwe (Zvandiri-Friendship Bench): a cluster-randomised controlled trial

Willis N<sup>1</sup>, Simms V<sup>2</sup>, Mutsinze A<sup>1</sup>, Chinoda S<sup>3</sup>, Wogrin C<sup>1</sup>, Bernays S<sup>4</sup>, Verhey R<sup>3</sup>, Mugurungi O<sup>5</sup>, Apollo T<sup>5</sup>, Weiss H<sup>2</sup>, Chibanda D<sup>3</sup>

<sup>1</sup>Africaid, 12 Stone Ridge Way North, Harare, Zimbabwe, <sup>2</sup>London School of Hygiene and Tropical Medicine, London, United Kingdom,

<sup>3</sup>Friendship Bench, Harare, Zimbabwe, <sup>4</sup>University of Sydney, , Australia, <sup>5</sup>Ministry of Health and Child Care, , Zimbabwe

**Background:** Adolescents living with HIV (ALHIV) experience high burden of mental health disorders which are a barrier to antiretroviral therapy (ART) adherence and contribute to virological failure. We aimed to evaluate the feasibility and effectiveness of a peer-led, problem-solving therapy (Friendship Bench (FB)) in addition to an adherence support programme delivered by Community Adolescent Treatment Supporters (CATS), on virological suppression and mental health among ALHIV with common mental disorders in Zimbabwe.

**Methods:** Sixty public primary care facilities in 10 districts of Zimbabwe were randomised (1:1) to provide standard CATS care (control arm) or enhanced CATS-FB care (intervention arm) to ALHIV. Eligibility criteria were living with HIV, registered for HIV care at one of the facilities, starting or already on ART and scoring >7 on the Shona Symptom Questionnaire (SSQ). All adolescents received counselling from health care workers at the facilities, CATS counselling at home and clinic, and were invited to support groups. In the intervention arm, CATS were trained to deliver problem-solving therapy adapted from the FB. The primary outcome was viral load >1000 copies/ml at 12 months or death. Secondary outcomes included symptoms of common mental disorders (SSQ-14 score >8), depression (PHQ-9>8), and EQ-5D total score for health-related quality of life. Multivariable logistic regression was used to estimate the intervention effect as odds ratios (ORs) and 95% confidence intervals (CI). In-depth qualitative data were collected and analysed thematically.

**Results:** Of 863 eligible participants, 842 (97.5%) consented to participate and were randomized. Of these, 764 (70.7%) had primary outcome data on viral load or death. At baseline, the proportion with virological failure was 33.7% (141/418) in the control arm and 36.4% (151/415) in the intervention arm. Viral load results are pending, available September. There was strong evidence of an intervention effect on screening positive with SSQ (2.4% vs 10.3%; OR=0.19, 95%CI 0.08-0.46) but not on the other outcomes. The qualitative findings illuminate the opportunities and challenges in applying the intervention with young people.

**Conclusion:** Integration of a problem-solving therapy package within a model of peer-led differentiated services can improve the mental health of ALHIV with common mental health disorders.

16

## Mental Health and Substance Use in Adolescents and Youth Living with HIV in a context of Violence.

Kamkuemah M<sup>1</sup>, Gausi B<sup>1</sup>, Oni T<sup>1,2</sup>

<sup>1</sup>Research Initiative for Cities Health and Equity (RICHE), Division of Public Health Medicine, School of Public Health and Family Medicine, University Of Cape Town, Cape Town, South Africa, <sup>2</sup>Medical Research Council Epidemiology Unit, University of Cambridge, Cambridge, United Kingdom

**Background:** Adolescents and youth living with HIV (AYLHIV) face an elevated risk for mental health disorders and several psychosocial challenges associated with living with a highly stigmatized communicable disease. Community violence further poses a risk to well-being and mental health and is associated with a variety of negative consequences. We set out to investigate depressive symptomology, psychological distress and substance use among 92 AYLHIV in townships in Cape Town, South Africa, one of the most violent cities in the world.

**Results:** More than half our participants (58%) reported orphanhood of which 12% reported double orphanhood; 47% reported a biological parent as their primary caregiver. High scores were achieved for positive parenting, but lower scores were achieved for parental supervision on the Alabama Parenting Questionnaire. Almost a third were neither in education, employment or training and 70% experienced household food insecurity. Significantly more females (51%) reported depressive symptoms compared to 19% of males. Overall 44% experienced mild, moderate or severe psychological distress with no differences by sex. More males were current smokers (48% versus 25% of females) and alcohol and harmful use of alcohol was highly prevalent with 41% reporting consuming alcohol in the past month (58% males versus 36% females). The lifetime prevalence of cannabis, illegal drugs and other substance use ranged from 23% for cannabis; 6% for cocaine, methamphetamine or mandrax; 9% for inhalants and 10% for over-the-counter or prescription drugs. Significantly more males reported lifetime use of any illicit substances (53% versus 30% for females). More than two-thirds reported having experienced some level of anticipated, enacted or internalized stigma. The majority (84%) reported moderate-high levels of exposure to community violence, including witnessing violent crimes such as seeing someone other than the police pointing or shooting a gun at someone.

**Conclusion:** Our results show high levels of depressive symptoms in urban AYLHIV. Poor monitoring and supervision and violent community environments may modify mental health problems in AYLHIV. Monitoring of adolescent social activities and providing recreational options in low-income communities rife with violence and substance use may interrupt harmful pathways associated with poor psychological outcomes in this vulnerable population.

17

## The psychological impact of COVID-19 on pregnant adolescents and young mothers.

Nalugo S<sup>1,2</sup>

<sup>1</sup>Joint Clinical Research Center, Kampala, Uganda, <sup>2</sup>Pediatric-Adolescent Treatment Africa (PATA) , ,

Ask-Boost-Connect-Discuss (ABCD) is an adolescent co-developed package of care provided by young peer supporters living with HIV under Pediatric adolescent treatment Africa (PATA) to reduce adolescent maternal depression, this tool helps adolescents and young mothers living with HIV and 15-24 years of age, to access basic maternal depression care through screening (ASK), evidence-based information on mental health support (BOOST), help with accessing services (CONNECT), and the provision of ongoing supervision and self-care (DISCUSS) , it helps these young mothers know about different things that can help them with day to day life, for example, their sexual and reproductive health rights, in the program they are educated about different types of family planning, to help them not to get pregnant again, there educated on their rights and empowered to make the right decisions.

### Material & Methods

We use the ABCD mobile phone app that guides peer supporters through this psychosocial support with the young mothers, this app has different sessions that can help determine if this adolescent is going through depression or any mental problem. We also use the elimination of mother to child transmission (EMTCT) clinic visits of these pregnant adolescents to follow up on how They are doing, in this way, the Peer supporters make them comfortable to share the difficulties that they are going through.

**Results:** Peer educators have been able to solve a number of problems for example; the financial wellbeing of adolescents in this way young mothers have been taught skills using phone calls and have been introduced to other adolescents so that they are able to support each other, and with these conversations, they have been able helping themselves solve their financial problems.  
The program has been able to attract a lot of adolescents to open up about their emotional difficulties.

**Conclusions:** Mental illness in young mothers and pregnant adolescents has always been ignored, The ABCD program as shown impact in just two months and it is the change maker for the pregnant adolescents and young mothers to have their capacities built for sustainable livelihoods and development.

18

## Adolescent girl-led participatory action research: early lessons from a sport-based cluster randomised trial in Cape Town, South Africa

Coakley C<sup>1</sup>, Myers L, Lee D<sup>1</sup>, Pike C<sup>2</sup>, Padian N<sup>3</sup>, Bekker L<sup>2</sup>

<sup>1</sup>Grassroot Soccer, Cape Town, South Africa, <sup>2</sup>Desmond Tutu HIV Centre, University of Cape Town, Cape Town, South Africa, <sup>3</sup>University of California, San Francisco, San Francisco, USA

**Background:** Youth participatory action research (YPAR) is a positive youth development approach that recognises youth as experts in their own health and disrupts the conventional power dynamics of traditional adult-led research by inviting participants to take an active role. We utilised YPAR to collect qualitative data during a randomised controlled trial that evaluated a sport-based sexual health programme for female learners aged 14-17.

**Description:** Youth investigators (YIs; n=9) from four schools were trained on YPAR methods, basic research skills and ethics. Pairs of YIs, supported by research assistants, conducted four workshops with peers (n=6-8), which included focus group discussions (exploring perceptions of the programme, friendships, intimate relationships), a 'dream programme' activity to conceptualise ideal components, recorded peer interviews, and other activities exploring how adolescents spend time and what topics interest them. methods were adapted based on YI input, following the first workshop. YIs also participated in analysis workshops through collaborative coding.

### Lessons Learned:

- YIs found the participatory training methods acceptable and appreciated developing research and leadership skills. They described the process as 'empowering' and liked 'finding out more about what girls go through'.
- Inviting adolescents to participate in data collection was feasible: most were eager to participate with training, and workshop sessions were well-attended. Only 2/9 YIs did not complete the programme.
- YIs required extensive training on qualitative interviews and discussions: skills are time-intensive to develop, requiring practice and reflection. YIs found approaching peers for 1:1 interviews difficult and tended not to probe.
- The meaningful involvement of YIs in analysis was challenged by time constraints.
- YIs should be engaged at inception to co-develop themes for investigation, formulate methods, and discuss dissemination.

### Next Steps:

The adult research team is comparing and integrating YPAR data with other sources for further analysis. When access to schools is possible again, the study team will meaningfully engage YIs in dissemination. This non-traditional method elicited more authentic data: YIs explored topics of interest to them, and were able to make their peers more comfortable as study participants. We recommend YPAR as a feasible, acceptable approach that complements traditional adult-led research methods.

**Abstract 19 is withdrawn**

20

## Capacity building to enhance adolescents in research

Itzikowitz G<sup>1</sup>, Edwards H<sup>1</sup>, Bekker L<sup>1</sup>

<sup>1</sup>Desmond Tutu Health Foundation, Cape Town, South Africa

**Background:** The Adolescent Health Division within the Desmond Tutu Health Foundation, is a research group committed to supporting adolescent access to sexual healthcare services during this fundamental period of life. The division has gained first-hand experience in the challenges relating to adolescent research. As part of our effort to prioritize adolescents in research the DTHF established the International Aids Vaccine Initiative (IAVI) Fellowship (2016) and the adolescent in Research Toolkit (AIRT) (2019) with IAVI and AHISA respectively. Originally designed as a face-to-face fellowship, IAVI provides fellows an opportunity to gain experience in the field of clinical research. In order to expand reach, the fellowship transitioned from a face-to-face to on-line platform. The SARS-COV-2 pandemic has further consolidated the need for remote capacity building for adolescents in research.

**Description:** The IAVI Fellowship, currently an online programme, affords young researchers the opportunity to be trained and mentored on various aspects of adolescent research. Fellows have access to the Adolescent in Research Toolkit, an online toolkit for research stakeholders providing resources on research design, preparation, implementation and dissemination.

### Lessons learned:

Challenges:

- Adapting to an online platform required communication between team members using a variety of platforms (Zoom, Microsoft Teams etc.) during power outages, poor internet connectivity and COVID-19 restrictions.
- Adapting field-work experience to online platforms required innovate changes to the original programme. An online course that 'mirrors' elements of face-to-face experiences was needed, ensuring fellows benefit from the knowledge of field-workers, albeit through video-recorded 'site visits' and virtual experiences.

Benefits:

- Increased capacity to accommodate a larger number of students from a diverse background; fewer access barriers (visas; local and international travel; accommodation costs).
- Online lectures are pre-recorded which allows flexibility, and the creation of an online reference library.

**Next steps:** The shift to an online forum poses a host of challenges. However, eliminating the need for physical travel creates the potential to expand opportunities and build capacity through a faster and potentially more efficient 'virtual' world. We are in the implementation phase of the online Fellowship course and thus far has been flexible and adaptive in response to challenges.

21

## Evaluation of a health improvement strategy by creating a Mobile HIV Care Team (MHIVCT) in collaboration with Community Actors (excluding mediators) in the Goudomp Health District (Sédhiou/Senegal).

KEITA I<sup>1</sup>, ANNE M<sup>2</sup>, GOMIS V<sup>3</sup>, DIAW C<sup>3</sup>, NDIAYE S<sup>3</sup>

<sup>1</sup>Ministry Of Health And Social Action, Dakar, Senegal, <sup>2</sup>Podor Health District, Podor, Senegal, <sup>3</sup>Goudomp Health District, Goudomp, Senegal

**Background:** Border to Guinea Bissau, Goudomp Health District (GHD) is located in southern Senegal in the Sédhiou Region. It consisted of 14 Service Delivery Points (SDPs) covering 03 boroughs, 15 town halls and 270 villages/neighbourhoods. There is more than 550 staff, 90% of whom are represented by the community fabric. Concerned about the accessibility of care, especially HIV-related care, GHD created a Multidisciplinary Mobile HIV Care Team (MHIVCT) in 2017 to improve community health with the collaboration of this community fabric. The exit from the MHIVCT was always guided by the mapping of the prevalent HIV cases in GHD especially based on a prioritization of MHIVCT intervention areas. Thus, the overall objective of the strategy was to strengthen HIV care through the use of a MHIVCT in collaboration with Community Actors (excluding mediators) in GHD by the end of 2017.

**Methods:** The strategy was to move the MHIVCT (Physician, Social Worker, HIV Data Manager, Laboratory Technician, etc.) to disadvantaged and hard-to-reach areas in order to provide communities with equitable HIV testing and care services with a comprehensive package of care and support for a person living with HIV (PLWHIV). Thus, it was an observational study of an evaluative (analytical: before and after) and descriptive (retrospective cross-sectional) type of the contribution of MHIVCT in the GHD area of responsibility in 2017. The data were collected by document reviews using the national platform for routine data management: District Health Information System 2 (DHIS2). Data entry, analysis, and interpretation required Excel and DHIS2 software. Finally, the results are presented in the form of tables, graphs, and images; the ethical considerations were effective.

**Results:** The strategy boosted HIV testing by 10% in GHD by the end of 2017. Thus the number of newly recruited PLWHIV increased by 27.2% in 2017, including 15.2% of HIV2 and 4.5% of dual profiles. The share of voluntary screening campaigns increased from 42.7% (2016) to 79.5% (2017) including vulnerable groups. Indeed, 210 Men having Sex with Men (MSM) and 60 Sex Workers (SW) were screened in 2017 compared to only 110 MSM and 485 people living with a disability in 2016. Also, MHIVCT has also improved the enrolment and follow-up of new recruits in the active cohort. In fact, the proportion of PLWHIV (newly screened) placed on antiretroviral treatment (ART) has increased from 73% (2016) to 94% (2017). The number of PLWHIV on ART and lost to follow-up in the area of responsibility of this district (excluding non-zones) decreased by 62.5%. Also in the follow-up of PLWHIV on ART, the proportion who received viral load increased from 37% (2016) to 46% (2017). For children born to HIV-Positive mothers, the proportion who received definitive serology increased by 62.5% in 2017. Screening for TB-HIV co-infection was boosted by 46.2% in 2017. Finally, the proportion of PLWHIV with ART who died decreased from 31% (2016) to 18% (2017).

**Conclusion:** Created in 2017 by GHD, the Multidisciplinary MHIVCT was a success in HIV care without forgetting its positive externalities in health.

## Developing a chatbot for HIV risk assessment among young people living in Soweto, South Africa

Mulaudzi M<sup>1</sup>, Wu M<sup>3</sup>, Ariyo O<sup>3</sup>, Dietrich J<sup>1,2</sup>

<sup>1</sup>Perinatal HIV Research Unit, University of the Witwatersrand, Johannesburg, South Africa, <sup>2</sup>Health Systems Research Unit, South African Medical Research Council, Cape town, South Africa, <sup>3</sup>Harvard Global Health Institute, Harvard University, Cambridge, United States

South Africa has the highest HIV prevalence in the world, and young people remain vulnerable to new HIV infections. There is a need for remote HIV prevention methods which tap into platforms that young people can engage with in a non-intrusive way. This study aimed to develop a self-administered HIV Risk Calculator through an iterative approach with young people.

Two groups of participants stratified by gender (men and women, aged 18-24 years) participated in two peer group Discussions each, conducted over 2 days. Two additional approaches were used: One-time mixed peer group Discussion (PGD), and 18 one-time in-depth interviews with young key populations (i.e. Gay, Bisexual, Lesbian, Transgender), aged 18-24 years. To provide baseline data for the app development process, participants completed a paper-based HIV risk assessment. Thereafter, participants provided feedback on the HIV risk assessment questions, their opinion towards using an internet-enabled HIV risk assessment, and recommendations to adapt the HIV risk assessment questionnaire into an online HIV risk assessment application. Qualitative data were analyzed thematically using NVivo qualitative data analysis software.

A total of 40 participants participated in either a PGD or IDI, 58% (23/40) were male, and had a median age of 20 (IQR: 19-22.75). Mobile phone ownership was 88% (35/40), of which 97% (34/35) used the prepaid Method for accessing mobile airtime, data or SMS-bundles. Overall, 86% (30/35) had access to the internet via a mobile phone, tablet, laptop or computer. Discussions with participants reiterated their preference for an interactive and informational online risk assessment, which allows them to openly ask questions about their health. Participants preferred discrete and private means to assess their own risk for HIV. HIV risk assessment questions identified as confusing and difficult (such as penetrative vaginal/anal sex; receive vaginal/anal/oral sex) were revised (vaginal/anal/ oral sex). During the software development phase, participants' opinions and recommendations from were considered in developing a Chabot for HIV risk assessment.

A collaborative and user-driven process is crucial when designing and developing an HIV prevention tool for targeted groups. Privacy and confidentiality are important features that may promote acceptability and willingness to use internet-enabled HIV prevention Methods.



23

## Impact of conditional economic incentives and motivational interviewing on health outcomes of HIV adolescents in Anambra State, Nigeria: a cluster-randomized trial

Ekwunife O<sup>1</sup>, Anetoh M<sup>1</sup>, Kalu S<sup>2</sup>, Ele P<sup>2</sup>, Eleje G<sup>2</sup>

<sup>1</sup>Nnamdi Azikiwe University, Awka, Nigeria, <sup>2</sup>Nnamdi Azikiwe University Teaching Hospital, Nnewi, Nigeria

**Background:** Adolescents living with HIV infection have been associated with worse treatment outcomes. This could be attributed in part to their vulnerability to risk-taking behaviour. They also face enormous difficulty in accessing HIV care services. HIV adolescents are therefore in need of service delivery interventions specifically designed for them to improve their health outcomes.

**Methods:** This cluster randomized control trial (RCT) evaluated the one-year impact of an Incentive Scheme comprising of conditional economic incentives and motivational interviewing on achieving undetectable viral load (primary outcome) and other secondary outcomes including CD4+ count, adherence to antiretroviral therapy and retention in care by HIV adolescents in Anambra State, Nigeria. Twelve HIV treatment hospitals were randomly assigned to the intervention arm or control arm to receive the Incentive Scheme or routine care respectively. A structured adherence support scheme termed the “Incentive Scheme” was applied to the intervention arm while the control arm received routine HIV care (usual care). Additionally, patients in the intervention arm received motivational interviewing at baseline and following initiation of antiretroviral therapy, they received \$5.6 if HIV viral load (VL) was <20 copies/mL at 12 weeks, \$2.8 if the VL remained suppressed for the next 3 months, and the next 6 months, and finally \$5.6 if the VL remained <20 copies/mL at 1 year. All cash incentives were conditional not only on viral load results but attending the motivational interviews.

**Results:** Of the 246 trial participants, 119 were in the intervention while 127 were in the control arm. Participants in the intervention arm had a 10.1% increase while those in the control arm had a 1.6% decrease in proportion with undetected viral load ( $\leq 20$  copies/ml). Changes in the secondary outcomes were not statistically significant.

**Conclusion:** The Incentive Scheme showed a positive effect on HIV adolescents’ virologic outcome in the short term. The trial was retrospectively registered with The Pan African Clinical Trials Registry: <https://pactr.samrc.ac.za/> (PACTR201806003040425) on 2 February 2018.

# **International Workshop on HIV & Adolescence - 2020**

*Building Health and Resilience*

**Abstracts  
Poster Presentations**

24

## Knowledge and utilization of Sexual and Reproductive Health Services

Asamoah A<sup>1</sup>, Asampong E<sup>2</sup>, Amissah C<sup>3</sup>

<sup>1</sup>Ghana Coalition of NGOs In Health, Accra North, Ghana, <sup>2</sup>School of Public Health, University of Ghana, Accra, Ghana, <sup>3</sup>37 Military Hospital, Ministry of Health, Accra, Ghana

**Background:** Addressing the reproductive health needs of adolescents remains one of the greatest public health issues confronting developing countries including Ghana. Utilization of reproductive is dependent on some basic factors including demographic conditions. The study aimed at assessing the knowledge level of adolescents and the predictors of sexual reproductive health service utilization in Ga East Municipality.

**Methods:** A cross-sectional study was conducted in Ga East Municipality among students from Primary, Junior High and Senior High Schools. Through a multistage sampling method, 242 adolescents were interviewed using structured questionnaires. Data collected was entered into excel and analysed quantitatively using STATA version 15. Logistic regression was done to determine predictors of sexual reproductive health (SRH) service utilization among adolescents. Significant results were reported in Odds Ratio at 95% Confidence Interval.

**Results:** Majority (54%) of the participants were females. The mean age of the respondents was 15.9 with 61% being SHS students. More than four-fifth (82%) of participants had adequate knowledge on SRH, however, only 39% have an idea of the existence/availability of dolescent friendly centres. The main sources of information on SRH was in-school education through peer educators. Knowledge on condom use was relatively high (78.9%) compared to national data. Of the 242 participants, only 37.6% had utilized SRH services in the last 12 months. Factors that influence SRH service utilization includes age 15-17 years (AOR=9.9; CI:2.4-15.1), females (AOR=1.5; CI: 1.3- 2.1) and knowledge on availability and location of adolescent friendly centre (AOR= 2.1; CI: 1.0-4.4). Other significant factors were seeing an advert or a poster on SRH (AOR=4.3; CI: 2.0-9.3) and availability of a peer educator providing SRH services in the school (AOR=1.8; CI: 1.7-4.8).

**Conclusion:** As a measure of increasing knowledge on SRH among adolescents, it is important to identify adolescents in every school to be trained as peer educators to facilitate in-school education on SRH. Significantly, an increase in SRH knowledge among adolescents will cause an increase in SRH service utilization. Adolescent are more comfortable discussing sexual reproductive health issues with their peers and teachers than any other group of people.

25

## Improving the life chances and quality of life of vulnerable Adolescents through HIV-Sensitive Social Protection in Kisumu County, Kenya. The Case of Cash Plus Care Interventions supported by UNICEF

### Overarching topic: Youth led initiatives

Ogutu B<sup>1</sup>, Moth E<sup>1</sup>, **OCHIENG A<sup>1</sup>**

<sup>1</sup>*Investing In Children and their Society (ICS), Nairobi, Kenya*

**Background:** The Kenya national HIV prevalence being at 6% in 2015, with adolescents and youth contributing to 46% of all the new HIV infections and 14% of all the AIDS-related deaths, urgent action was inevitable. Kisumu county had HIV prevalence of 19.9%; with 13,988 adolescents living with HIV and 2,688 new annual HIV infections and 217 annual AIDS-related deaths. Weak systems and capacities of community-based care and social welfare services, inadequate capacity at the county level to plan, implement and monitor joint social protection and HIV programmes were apparent. Evaluations of social protection programmes by UNICEF indicated that cash alone is not enough, and thus the need to link cash transfer interventions with social services to induce synergistic impacts on adolescents.

**Materials and Methods:** The comprehensive social protection encompassed a wide range of plus activities and linkages integrating programmes across sectors addressing different dimensions of poverty to more effectively support adolescents through:

Creating Adolescent Safe Space in and out of schools: A platform to share challenges and experiences on HIV risk factors, relationships, career and talent.

Assigning adolescent mentors: Engage with adolescents in structured sessions including life skills and HIV&AIDS education.

Engaging adolescents in advocacy platforms: Voices of adolescents picked from the adolescent symposia activities used to beef up Kisumu County Adolescents and young persons Health policy.

Parenting training for caregivers/parents of adolescents: Provided appropriate skills and tool for parents of adolescents to support them in their caregiving role and promote responsive caregiving and positive parenting.

**Results:** 3,053 (1,593 males and 1,460 females) adolescents received HTS services; 52 (1.6%) tested positive for HIV and all linked to care.

Birth registration increased from 82% at baseline to 95% at endline.

69% of 8527 adolescents reached with HIV prevention, care and treatment services.

2,323 caregivers of 5,191(2,119 boys and 3, 072 girls) adolescents registered with NHIF.

71% of adolescents linked to mentors.

**Conclusions:** Promoting youth-led initiatives through enhanced outreach services, strengthened community systems, parenting education as well as multi-sectoral approach and coordination by lead government agency yields benefits for young people affected by HIV.

26

## Effectiveness of the Early Warning System to curb school dropouts in schools

**Mundingi R<sup>1</sup>**, Dhakwa D<sup>1</sup>, Mudzengerere F<sup>1</sup>, Nyagura T<sup>2</sup>, Mafaune H<sup>1</sup>, Gwanzura C<sup>3</sup>, Ncube B<sup>1</sup>, Mudokwani F<sup>1</sup>, Pfupajena M<sup>1</sup>, Harbick D<sup>1</sup>, Zulu T<sup>1</sup>, Tafuma T<sup>1</sup>

<sup>1</sup>FHI360, Harare, Zimbabwe, <sup>2</sup>USAID Zimbabwe Mission, Harare, Zimbabwe, <sup>3</sup>MOHCC Zimbabwe, Harare, Zimbabwe

**Background:** Education is a declared a fundamental human right as it enables human development through knowledge, values and skills which promote economic independence. Female students are disproportionately vulnerable to school dropout as compared to their male counterparts and this is due to socio-cultural, financial and health related reasons. Thus, dropping out of school exposes adolescent girls and young women (AGYW) to sexual risk behaviours which in turn may increase risk of HIV infection. FHI360 Zimbabwe is implementing a five-year USAID-funded Determined, Resilient, Empowered, AIDS-free, Mentored, and Safe (DREAMS) program, whose goal is to reduce new HIV infections amongst vulnerable adolescent girls and young women (AGYW) aged 15-24. Through the DREAMS programmes, Early Warning System (EWS) is one of many approaches being implemented to prevent school dropout. EWS uses screening tools to identify potential school dropouts and measures are taken to prevent dropping out. This study assesses the impact of EWS in curbing school dropouts in the DREAMS supported districts.

**Methods:** This was a cohort study involving analysis of routine programme data of AGYW who were assessed using the EWS tool to determine their potential of dropping out of school in October 2019. Data was analysed using SPSS VERSION 24.0.

**Results:** During the period under review, 94.4%(5575/5908) were reported constantly attending school whilst 5.5%(325/5908) were frequently absent from school and 0.1% were dropouts. Of those who were frequently absent, 96%(312/325) were aged 9-14 years old. Thus, the EWS managed to identify and retain 98%(319/325) of the AGYW showing signs of dropping out from school and retained them. It was also noted that households with both parents alive and married had 52% of their children showing signs of dropping out of school.

**Conclusion:** The early warning system has managed to identify AGYW who were at risk of dropping out of school. Such initiatives help to pre-emptively identify students who are at risk of dropping out of school and to promptly react to them. The DREAMS programme will continue to use the EWS to identify and curb school dropouts.

27

## **‘Us young people really depend on it’: Adapting a youth-centred community-based HIV intervention in Zimbabwe in the context of COVID-19**

**Mackworth-Young** C<sup>1,2</sup>, Mavodza C<sup>1,2</sup>, Nyamwanza R<sup>2</sup>, Tshuma M<sup>2</sup>, Nzombe P<sup>2</sup>, Dziva Chikwari C<sup>1,2</sup>, Tembo M<sup>1,2</sup>, Dauya E<sup>2</sup>, Ferrand R<sup>1,2</sup>, Bernays S<sup>1,3</sup>

<sup>1</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>2</sup>Biomedical Research and Training Institute, Harare, Zimbabwe,

<sup>3</sup>University of Sydney, Sydney, Australia

Risky sex among youth may increase during the COVID-19 pandemic, yet the ability of services to meet this heightened need are compromised. We discuss how a youth sexual and reproductive health (SRH) intervention in Zimbabwe is adapting in the context of COVID-19, and the implications for youth’s HIV and SRH prevention and care needs.

CHIEDZA is a community-based integrated intervention, co-designed with youth, offering HIV services (prevention, testing, treatment, and adherence support) alongside other SRH services. We present findings from the trial’s process evaluation during the COVID-19 pandemic, including during temporary closure in March 2020, and reopening as an essential, but adjusted, service in May. Data include: interviews with healthcare providers (n=17 during service closure; n=15 when service reopened); interviews with youth clients and mobilisers (n=40); non-participant observations of intervention sites (n=11); and participant observations of management meetings tracking intervention decisions. Data collection and analysis has been iterative and inductive, with key themes identified through weekly analytical discussions, and coding using Nvivo12.

When CHIEDZA re-opened, COVID-prevention adaptations included removing social activities (for social distancing), framing services as essential (to justify re-opening), and changing timings of service provision (due to government-mandated working hours). Removing social activities particularly impacted young men’s engagement, already a hard-to-reach group, leading to gendered adaptations to mobilisation strategies to target males. Emphasising essential services reframes CHIEDZA as being for those ‘at urgent risk’, undermining a core principle to deliberately target services to all young people to increase social acceptability. Changing timings of service provision compacted providers’ time with clients, heightening the tension between quantity of clients and quality of service provided.

CHIEDZA’s reopening enabled provision of critical services for youth in Zimbabwe, but with major adaptations. Our findings indicate the significance of social activities, youth-friendly hours, and time with non-judgemental providers, and the implications of their removal on youth access, engagement and uptake of integrated HIV services. COVID-19 has dramatically altered service provision in a way other infection risks have not. Development of creative approaches to integrate COVID-related restrictions into youth services is needed to minimise the threat this poses to improving youth HIV outcomes.

28

## Building a strong team for girls: qualitative Findings on the acceptability and feasibility of a sexual and reproductive health intervention for adolescents in Cape Town, South Africa

Coakley C<sup>1</sup>, Pike C<sup>2</sup>, Lee D<sup>1</sup>, Hartmann M<sup>3</sup>, Padian N<sup>4</sup>, Bekker L<sup>2</sup>

<sup>1</sup>Grassroot Soccer, Cape Town, South Africa, <sup>2</sup>Desmond Tutu HIV Centre, University of Cape Town, Cape Town, South Africa, <sup>3</sup>Women's Health Global Imperative, RTI International, Cape Town, South Africa, <sup>4</sup>University of California, San Francisco, San Francisco, USA

**Background:** Adolescence is a period of opportunity and risk that calls for age-appropriate, comprehensive sexual and reproductive health (SRH) programming. Using schools as an entry point, Goals for Girls (G4G), a cluster-randomised trial, sought to evaluate a sport-based SRH education program for female learners aged 14-17.

**Materials & Methods:** Forty schools across two cohorts were randomised 1:1 to receive SKILLZ, a 10-session program facilitated by "Coaches", trained young female mentors. In addition to an impact evaluation, focus group **Discussions** (FGDs) with participants and Coaches, and in-depth interviews with school staff and teachers were conducted exploring their perceptions of G4G after implementation. Additionally, select adolescent participants trained as 'youth investigators' led participatory workshops with peers, including FGDs. Qualitative data were coded and thematic analysis was used to analyse coded data to assess intervention acceptability, feasibility, and impact on participants.

### Results:

Key themes were endorsed by diverse sources, and include:

- G4G was a highly acceptable and relevant intervention amongst participants, school staff, and coaches, responsive to gaps in existing programming and girls' knowledge. It motivated girls to choose healthier relationships and helped build confidence to take action and face challenges in their lives, such as responding to rape. It was also viewed as increasing confidence at home and in the classroom setting.
- Participants valued the intentional design of the intervention, including the girls-only peer group, participatory learning medium, and safe spaces created by the Coaches. Coaches' role as effective mentors were improved by their relatable experiences and cognitive empathy for participants.
- Full implementation as intended was undermined by diverse, compounding factors that varied across schools, including competing demands for learners' time, level of school support, and community safety. There were significant differences between schools in terms of culture, procedures, willingness and capacity to provide practical assistance, and resources.

**Conclusions:** Qualitative findings indicate the program is highly acceptable and has positive effects on participants' relationships and self-concept. discussion of healthy relationships and building confidence appeared to be an effective entry point for SRH and wellbeing. Despite high acceptability, the feasibility of implementing the programme faced significant challenges.

29

## Intervention and Service Delivery approach (from the community to facility).

*Nengomasha N<sup>1</sup>*

<sup>1</sup>SAfAIDS, Harare, Zimbabwe

**Background:** New HIV infections remain high among adolescent girls and young women in Rushinga District of Zimbabwe. Adolescent lack knowledge on SRHR as well as access to comprehensive Adolescent Sexual Reproductive Health services due to cultural, religious and service provision barriers. There are cultural practices that promote, abuse of girls and young people such as child marriages, and intergenerational relationships.

**Materials and Methods:** SAfAIDS conducted training for Peer educators' champions on HIV/SRHR/GBV risk reduction. In addition, SAfAIDS trained service providers on provision of adolescent friendly services, religious, traditional leaders, and parents/guardians on parent to child communication, in relation to HIV/SRHR/GBV. The trained champions reached out to other young people through one-on-one interactions, in and out of school clubs and community dialogues. They conducted referral for service provision for both clinical and non-clinical services provision to Tanaka Adolescent and young people clinic. The use of in-school GBV rooms is a critical method in reaching out to adolescent in school on issues related to GBV/HIV among Young People. In and out of school young 4 real clubs are inclusive safe spaces for all adolescents and young people where they conduct guided sessions using developed guides. These sessions are highly interactive, and all adolescents are encouraged to participate in non-discriminatory, non-stigmatising, and non-normative way. Process Oriented Approach to comprehensive sexuality education and information were also used as an entry point to discuss HIV new infections among young people.

**Results:** Empowering champions with HIV/GBV/SRHR knowledge and skills increased openness through sharing different narratives on the issues and increasing knowledge and the uptake of SRH and HIV services for young people. Reporting of GBV cases among adolescent increased due to the use of the GBV response mechanism through the 72-hour GVB room, Mukuru box, and young 4 real clubs. The clinic provides SRHR services for adolescent's young under one roof.

**Conclusion:** SAfAIDS is planning to scale up the programme from four wards to the rest of the district as well as two more districts in Zimbabwe.



30

## Delivery of school-based interventions to promoting adolescent health and well-being: Lessons from a multilevel HIV-prevention intervention through DREAMS in rural KwaZulu-Natal, South Africa

Chimbindi N<sup>1,2</sup>, Mthiyane N<sup>1</sup>, Birdthistle I<sup>3</sup>, Zuma T<sup>1,2</sup>, Sherr L<sup>2</sup>, McGrath N<sup>1,4</sup>, Mdluli S<sup>1</sup>, Harling G<sup>1,2,5,6</sup>, Floyd S<sup>3</sup>, Seeley J<sup>1,3</sup>, Shahmanesh M<sup>1,2</sup>

<sup>1</sup>Africa Health Research Institute (AHRI), P.O Box 198, South Africa, <sup>2</sup>University College London, London, United Kingdom, <sup>3</sup>London School of Hygiene and Tropical Medicine, London, United Kingdom, <sup>4</sup>University of Southampton, Southampton, United Kingdom, <sup>5</sup>Harvard University, Boston, United States of America, <sup>6</sup>University of the Witwatersrand, Johannesburg, South Africa

**Background:** South African adolescents are disproportionately burdened by sexual health-related morbidity, notably teenage pregnancy, HIV and other sexually transmitted infections. The WHO Health Promoting Schools (HPS) framework, an eco-holistic model, uses a whole-school approach to create a positive health environment to support health promotion. To inform whole-school intervention development, we examined the implementation of the school-based component of the DREAMS partnership, a multi-level HIV-prevention intervention in rural KwaZulu-Natal, South Africa.

**Methods:** In 2017-18 we conducted participatory community-mapping of four purposively-sampled communities using in-depth interviews (n=58), group discussions (n=13) with adolescents and youth aged 10-35, interviews with intervention providers (n=17) and life orientation teachers (n=3) and participatory observations. All interviews were audio-recorded, transcribed, and analysed using thematic content analysis.

**Results:** The context prior to intervention delivery was one of low reported condom use, high levels of teenage pregnancy rates (major reason for school drop-out among girls), alcohol and drug use, violence, and transactional sex. However, schools were seen as safe spaces for health education, with teachers being perceived as trusted confidants and sources of health information mostly delivered through Life Orientation and biology lessons.

Most adolescents participated in DREAMS school-based interventions (16 scripted participatory sessions aimed at changing gender norms; peer and educational support to remain in school) and found them beneficial. However, there were challenges setting up and delivering these interventions: implementing partners were unable to integrate DREAMS health interventions within the existing school curriculum or health programmes, or to provide biomedical services such as condoms and contraception, due to school management and education policies. Partners were limited to using schools as recruitment and delivery venues. Insufficient educational subsidies and challenges with referrals between DREAMS partners and government departments for provision of further care and other services hindered optimal intervention delivery. However, traditional/political leaders buy-in, partner home-visits and parental/guardian involvement facilitated intervention delivery and effectiveness.

**Conclusion:** As learning-positive spaces with trusted adults, schools in rural South Africa provide a favourable setting to promote health and well-being. However, failure to integrate interventions into the school environment or create school-based/linked biomedical health services alongside health promotion, limited their effectiveness in practice.

31

## How is the vulnerability and risk of AGYW to HIV, STI and unintended pregnancy being assessed in East and Southern Africa.

Ferguson J<sup>1</sup>, Armstrong A<sup>2</sup>

<sup>1</sup>Independent consultant, Tannay, Switzerland, <sup>2</sup>UNICEF, , Kenya

Although progress is being achieved in reducing SRH problems among AGYW globally, there is ongoing concern of high incidence of HIV, STI and unintended/unsafe pregnancies among them in many countries in Africa. Through the 2gether 4 SRHR joint UN programme, UNICEF ESAR commissioned a consultancy to document experiences of the use of tools and methods to assess vulnerability and risk in programmes to prevent HIV, unintended pregnancy and the prevention of mother-to-child transmission of HIV and syphilis.

A mixed method approach was used to identify and analyse existing tools/methods including a review of literature and websites; conference abstracts; and interviews with key individuals undertaken virtually of national level: government programme staff (4) ; tool developers (2) researchers (4) supporters of tool implementation (12) implementors of tools in countries (12).

**Findings:** Seven tools were identified through the literature and a variety of tools through stakeholders from 12 countries. Many of the tools assessed a number of common factors thought to give rise to vulnerability and risk and addressed a range of apparent purposes for the use of the tools within programming processes e.g. establishing beneficiary eligibility for or continuation in programmes; establishing need for additional support or interventions. Some challenges were indicated in the administration of the tools; and there were limited measures or perceptions about effectiveness of the tools' utilization. In the literature there is limited information about the results and experiences of use of tools/methods to assess vulnerability and risk. In addition, there is little attention in the literature and through consultations on tools/methods to specifically assess factors rendering adolescent girls vulnerable to unwanted and/or unsafe pregnancy or STI – most of the attention is on HIV. Further implementation understanding is anticipated with upcoming engagement with government officials. The review has been limited in that no tools were examined apart from the literature on facility-based tools and there was limited access to Standard Operating Procedures

**Conclusion:** This review contributes to our understanding of what approaches are being employed and how they are being implemented. It also highlights areas for potential examination of ways to improve programme efficiency and effectiveness.

32

## The application of the “Differentiated Approach” to HIV/Covid-19 prevention among adolescents as an efficient response strategy: The case of HORIZON JEUNE in Cameroon.

PANGUI MEFENYA P<sup>1</sup>, KENGMO E<sup>1</sup>, BACHA K<sup>2</sup>, OLOUME BEYEME V<sup>2</sup>, BONY N<sup>3</sup>

<sup>1</sup>Horizon Jeune, Dschang, Cameroon, <sup>2</sup>UNICEF, Yaounde, Cameroon, <sup>3</sup>PRESSE JEUNE, Yaounde, Cameroon

**INTRODUCTION:** In Cameroon, HIV / AIDS remains a serious public health burden. The national prevalence is estimated at 0.8% among adolescents aged 15-19. Dschang Health District has approximately 236,505 inhabitants with nearly 26,016 adolescents aged 15-19 (11% of the population). Several initiatives in favour of HIV response for adolescents exist in the country, since it is crucial for the later to acquire basic HIV knowledge and prevention skills which are essential for attaining the three 90s. Moreover, the advent of Covid-19 in the country since March 2020 has increased the vulnerability of these adolescents and seriously affected their access to HIV prevention and care services. Thus, from January 2019 to June 2020, community outreach actions for comprehensive adolescent's centred HIV/Covid-19 services were implemented to reinforce local response to these health problems.

**METHODOLOGY:** The activities were carried out targeted high adolescents' gathering spots in the communities involved. Thus, volunteer peer educators were deployed to achieve the planned results through:

- Educative talks with cohorts of 20
- Interpersonal (face-to-face) talks with those most at risk
- Outreach information, sensitization and screening campaigns
- Advocacy

### MAIN RESULTS:

Within the period stated:

- 3630 adolescents received comprehensive and updated HIV/Covid-19 information-education-counseling services and were tested for HIV.
- 24 tested positive and linked to care services including therapeutic education and permanent individual follow-ups.

**CONCLUSION:** All of the activities carried out jointly integrated HIV/AIDS, STIs, and Covid-19 topics. New information and communication technologies (community radios; social networks; U-Report digital platform) were put at contribution to maximize the results obtained and the impact generated. Plus, these activities and the approach used helped to significantly strengthen the HIV/Covid-19 response among adolescents in the Dschang Health District, and improve support and ownership by the beneficiaries and their home communities.

33

## Barriers to integrating HIV-SRHR and adolescent friendly health services

Phillips L<sup>1</sup>, Hatane L<sup>1</sup>, Mark D<sup>1</sup>, Masangane T<sup>1</sup>

<sup>1</sup>Paediatric-Adolescent Treatment Africa (PATA), Cape Town, South Africa

**Background:** HIV services for adolescents living with HIV often have limited integration with other adolescent health services such as those for mental health, and adolescent sexual and reproductive health rights (SRHR). Many adolescents living with HIV therefore continue to receive services that are not appropriate to meeting their unique needs. Increasing the synergies between SRHR and HIV services provides opportunities to address the multiple, interlinked health needs of adolescents and young people.

**Materials and Methods:** Data were collected at the PATA 2019 Summit through a cross-sectional semi-structured survey. Surveys aimed to better understand the implementation of integrated HIV-SRHR and adolescent friendly health services at health facilities. Data were analysed using descriptive statistics and thematic coding to identify central themes for qualitative data.

**Results:** Forty-six health providers completed the survey of which 68% were from East Africa, 29% Southern Africa, and 3% West-Central Africa. Providers reported barriers to HIV-SRHR integration at both individual and systematic level. These included provider characteristics such as lack of training in both/either service delivery area (reported by 61%); generic health system challenges like shortage of staff (74%) and increased workload for service providers (63%); and poor infrastructure, with insufficient space and privacy to deliver both services (61%). At the policy level, unclear standard operating procedures and guidelines were identified as a barrier.

**Conclusions:** The integration of SRHR and HIV at the facility supports adolescent-friendly service delivery in that it streamlines services for adolescents and young people. However, significant health system barriers need to be overcome in order to achieve this. Findings showed that strengthening the capacity of health workers and health facilities is imperative – training and ongoing support should be provided to facilitate this. Additionally, more than one health provider should be trained to allow for staff turnover. Lack of adequate physical space and privacy was highlighted as another barrier. Adolescents attach much importance to their privacy and may not access health services if they perceive health facilities cannot guarantee them adequate privacy. Implementation of policies and laws promoting integration are also needed, which should be supported by successful and sustained training to facilitate implementation.

34

## Sexual and reproductive health issues of Adolescents Living with HIV in Zimbabwe

*Milanzi A<sup>1</sup>, Wekwete N<sup>1</sup>*

*<sup>1</sup>University Of Zimbabwe, Harare, Zimbabwe*

Young people living with HIV face unprecedented challenges related to their sexual and reproductive health as well as problems related to their HIV status. This study sought to investigate the sexual and reproductive issues of adolescents living with HIV (ALHIV) in Gweru rural district in Zimbabwe.

The target population was adolescents living with HIV in Gweru. The study used a cross sectional mixed method research design with qualitative and quantitative methods. The study administered 112 questionnaires to ALHIV, conducted four focus group discussions with ALHIV in Gweru rural district and six key informant interviews at district and national levels.

All respondents reported that they were not in relationships and were not sexually active, although 62% intended to have sex in future. The majority of the respondents (94%) lacked general understanding of relationships while 64% lacked comprehensive knowledge of SRH issues. Less than half of the respondents were aware of modern contraception methods, namely female condoms (39%), male condoms (37%) and the pill (25%). Adolescents Living with HIV mainly access HIV-related services in Gweru rural district. However, there is limited access to SRH services, besides HIV treatment, as 41% of ALHIV reported talking to a health service provider about SRH issues such as sexuality, family planning, condoms, sexually transmitted infections, pregnancy and child bearing.

All respondents were not in relationships, which is unusual among these ages, showing that they faced more challenges than their counterparts who are not HIV positive. The key SRH issues facing ALHIV include lack of comprehensive knowledge on SRH issues and limited access to SRH services. The MoHCC and stakeholders need to establish and/or revitalize youth-friendly centres based on rigorously tested models like the Zvandiri Programme to ensure effective strategies go beyond psychosocial support and treatment adherence.

35

## Perceptions and experiences of puberty among participants of the Girls Achieve Power (GAP) Year cluster randomised control trial programme in three townships, South Africa: Qualitative Findings

Mahuma T<sup>1</sup>, Matsaira P<sup>1</sup>, Suh Yah C<sup>1</sup>, Kutwayo A<sup>1</sup>, Naidoo N<sup>1</sup>, Mullick S<sup>1</sup>

<sup>1</sup>Wits Reproductive Health And Hiv Institute, Parktown, South Africa

**Background:** Puberty can be an overwhelming period for adolescents as they navigate in the society. This paper aims to examine perceptions and experiences of puberty among male and female learners who participated in GAP Year. GAP Year is an asset building programme that aims to empower adolescent girls while shifting positive gender attitudes among boys as they progress in education.

**Methods:** Single sex focus group discussions (FGDs) (45-60 minutes long) were conducted with grade 9 learners enrolled in the GAP Year between April 2018–September 2019 across 13 schools in Khayelitsha, Tembisa and Soweto by trained researchers. Learners that completed at least 16 sessions of GAP Year were randomly selected using the random test. Informed assent and consent were obtained. Semi-structured FGD guides with sections on health and safety including sexual reproductive health and puberty were used to collect data. FGDs were conducted in three major local languages spoken by learners in the townships with 5-17 learners per group. Data were transcribed into English and cross checked by two team members. Data were coded and the themes developed and analysed using NVivo 12.

**Results:** A total of 26 FGDs were conducted (13 with boys and 13 with girls): 206 learners participated (106 boys and 100 girls). All participants were Black Africans aged between 14 and 16 years old. Three themes emerged: social interaction, positive and negative experiences. Under social interaction girls felt embarrassed by comments that male community members made about their bodies. Boys stated that older women in the community viewed them as 'potential partners'. Positive experiences for girls included having embraced changes such as growing fuller hips and breasts. For boys, growing taller and developing muscles were viewed positively. Girls in Soweto and Tembisa viewed menstruation as stressful. Khayelitsha boys reported that girls date older boys as opposed to their peers.

**Conclusions:** Learners are aware of their changing bodies. Institutional structures such as community norms and relations, affect how adolescents experience puberty. Programmes at individual and community level that can support adolescents during puberty and dispel misinformation about puberty among adolescents should be developed.

36

## Getting To What Works: Are Current HIV Prevention Strategies Effective in Addressing Young People's Realities?

Awori R<sup>1</sup>, Niwagaba N<sup>1</sup>, Welbourn A<sup>2</sup>, Bajenja E<sup>3</sup>

<sup>1</sup>Uganda Network Of Young People Living With Hiv, Kampala, Uganda, <sup>2</sup>Salamander Trust, London, United Kingdom, <sup>3</sup>Agency for Cooperation in Research and Development (ACORD), Kampala, Uganda

**Background:** In Uganda over 1,000 new young people aged 15-24 are weekly acquiring HIV. Reasons include ongoing information gaps, challenging social norms, and increasing drug resistance through poor adherence. Externally-led community mobilization responses 'target' HIV-negative young women only, excluding significant others around them. Additionally, U=U programming specifically 'targets' young people living with HIV to stop onward transmission. These methods contrast with Uganda Network of Young People living with HIV's approach, based on our own lived experiences. We explore these issues here further.

**Materials and Methods:** We have compared our approach with these external responses to primary and secondary HIV prevention. Ours emphasizes the critical value of holistic engagement with all key players in our lives, including adolescent girls and young women themselves, irrespective of their HIV status, boys and young men, their parents, older 'sugar daddies', religious/cultural and political leaders. We always aim to widen and strengthen members' support networks, to enhance ARV adherence and positive living, whilst also emphasizing shared community-wide responsibilities for all HIV prevention, based on mutual care, respect and support.

**Results:** Only 'targeting' HIV-negative or positive young women alone with narrow HIV-prevention-specific programming, unfairly places responsibility for changing social norms on their shoulders alone. Additionally, exclusion of key players from these processes often results in their demanding censorship of program content. For example, Uganda's National Sex Education Framework which is under pressure to exclude certain key subject areas from programmes, which we as young people consider essential information. By contrast, working systematically with all key stakeholders ensures that diverse needs and priorities of all young people alike, including those with HIV, are meaningfully included in all decisions that affect our lives.

**Conclusions:** There is a critical need for inclusive holistic programs, involving all key players, based primarily on our own priorities, to achieve desired outcomes, as highlighted by Stepping Stones practitioners in 2019. We continue to emphasize the importance of flexibility of donors and government structures alike, based on our own lived experiences. This has a strong evidence base. Short-term project-based funding strategies with narrow population 'targets' and limited topic areas continue to undermine effective outcomes.

37

## Exploring Family Planning Methods accessibility and preference among adolescents in Zambia

**Banda T<sup>1</sup>**, Munthali V<sup>1</sup>, Kayumba B<sup>1</sup>

<sup>1</sup>Centre For Infectious Disease Research In Zambia, Lusaka, Zambia

**Introduction:** Unintended pregnancy, including unsafe abortion, amongst adolescent and young women remains a major contributor to maternal and child mortality and morbidity, and to intergenerational cycles of ill-health and poverty. Maternal conditions are the leading cause of death among girls and young women aged 15-29 years globally, with unprotected sex being a key underlying risk factor of mortality amongst women of reproductive age. In Sub-Saharan Africa (SSA), adolescent girls are disproportionately burdened with unintended pregnancy and unsafe abortions compared to adult women and pregnancy and childbirth complications are a leading cause of death amongst this age group. We strengthened and supported youth friendly family planning methods to adolescent girls and young women aged 16 to 24 years in Lusaka, Chongwe, Senanga and Kaoma districts of Zambia.

**Methodology:** Working with adolescent peer educators, we distributed various family planning methods such as condoms, oral contraceptives, injectible contraceptives, emergency pills and Intra-uterine devices to 20 adolescents. A semi-structured questionnaire was then administered to the adolescents from 8 health facilities from Lusaka, Senanga and Kaoma districts in order to understand their family planning accessibility and preference.

**Results:** During implementation (February–March 2020), 86% of adolescents mentioned accessing family planning from health facilities while 10% adolescents accessed family planning methods from pharmacies and (4%) from community based organizations (CBOs). In addition, 55% preferred injectible contraceptives as their family planning Method while 35% preferred emergency pills as their method of contraceptives and preferred 10% preferred the use of condoms as their family planning method.

**Conclusion:** There is need to strengthen community access to family planning methods as some adolescents who shy away from the facilities may have no access to family planning methods. There is also need to scale up provision of injectible contraceptives as these are the preferred methods of contraceptives among adolescents. However, more sensitization on the correct use of emergency pills is cardinal as this is growing popularity among adolescents and young women.



38

## Understanding barriers to uptake of teaching Sexual health education in Zimbabwean and rural Secondary schools. A case of Holy Family Secondary School, Buhera District.

Zimunya T<sup>1</sup>

<sup>1</sup>Ministry Of Primary And Secondary Education, Mutare, Zimbabwe

Understanding barriers to uptake of teaching sexual health education in Zimbabwean rural secondary schools:  
A case of Holy Family Secondary School, Buhera District

Tapuwa. A. Zimunya<sup>1</sup> & Kudzaishe Mangombe<sup>2</sup> Great Zimbabwe University 1 Center for Population Studies,  
University of Zimbabwe<sup>2</sup>

Corresponding author: Tapuwa. A. Zimunya: Email address: tapzim@gmail.com

### Abstract

Sexual and reproductive health and rights and education programs are one of the top priority interventions by governments globally aimed at trying to prevent child abuse, STIs and HIV prevalence, unwanted pregnancy and school drop outs among the adolescents. To meet the current critical need, the Zimbabwean government introduced an integrated sexual health education (SHE) curriculum to provide students with the knowledge and skills to help them be healthy and avoid these problems. There is little research on barriers to uptake of sexual health education at Holy Family Secondary School, Buhera District, Zimbabwe. We conducted five in-depth interviews with key informants and five focus group discussions to understand the barriers to uptake to SHE in secondary schools. The study revealed many barriers such as: lack of willingness among the teachers to teach it because of poor remunerations and teachers not comfortable to teach it. In addition, SHE is not an examinable learning area, lack of teaching and learning resources, lack of law enforcement; and several cultural barriers were mentioned by guardians, parents and community at large. Given the complexity of the barriers, our findings suggest that SHE should not be taught as an integrated subject but a standalone subject and the community should be offered more information from schools about the SHE curriculum.

Key words: Human immunodeficiency virus, child abuse, teenage pregnancy, gender equality, reproductive health, sexual health education,

39

## Identifying Barriers To Accessing Health Services: Detention Period For Juvenile Offenders In Adult Correctional Facilities Zambia

**Moomba Thornicroft**<sup>1</sup>, Mary Kagujje<sup>1</sup>, Kabaghe Tamiwe<sup>1</sup>, Tamala Zgambo<sup>2</sup>, Sisa Hatwiinda<sup>1</sup>, Sara Nyangu<sup>1</sup>, Moonga Clement<sup>1</sup>, Monde Muyoyeta<sup>1</sup>

<sup>1</sup>Centre For Infectious Diseases Research In Zambia, Lusaka, Zambia

**Background:** The juvenile act of the laws of Zambia stipulates that as much as possible, authorities should avoid detention of juveniles and if juveniles are detained, as much as possible, they should be prevented from associating with adults who are charged with an offence. Juveniles in conflict with the law in Zambia are detained in adult correctional facilities before they are ordered (sentenced). Detention in adult correctional facilities which are often overcrowded not only exposes juveniles to certain criminal behaviour but also increases their risk for sexual abuse, mental health disorders, malnutrition and infectious diseases including HIV and TB. A survey was conducted to understand the average period of detention of juveniles in adult correctional facilities and the reasons for delayed transfer to juvenile appropriate facilities.

**Methodology:** Data was collected from 10 correctional facilities as part of the baseline assessment by the Elton John AIDS Foundation EJJOH project. A desk review of admission files was done to determine the average detention period in adult correctional facilities. 224 juveniles aged between 14 and 19 were interviewed in the presence of a correctional officer to understand the reasons why they were still detained in adult correctional facilities.

**Findings:** A total of 224 juveniles were found in adult correctional facilities. The juvenile detention period in adult correctional facilities ranged from 54- 1,324 days. Of the juveniles interviewed, 130 (58%) had delayed High Court confirmations for 6 months or longer, 38 (17%) lost documentation or transferred from other districts without the necessary documentation, 20 (9%) had been waiting for transfer to Reformatory/ Approved schools for 6 months or longer, 26 (12%) awaiting trial or committal to high court, 10(4%) had no guardian/ Social Welfare representation during hearings, no witnesses, age determination reports,

**Conclusions:** Juveniles stay in adult correctional facilities for extended durations; the factors contributing to prolonged detention in adult correctional facilities are primarily system factors. Without these factors being addressed, prolonged stay of juveniles in adult correctional facilities will continue to be a structural barrier to accessing appropriate health services

40

## Limitations and dilemmas of information dissemination on sexual and reproductive health and rights in sub-Saharan Africa.

*Tapiwa L<sup>1</sup>, Nyathi D<sup>1</sup>*

<sup>1</sup>Women's University In Africa, Bulawayo, Zimbabwe

Sexual and reproductive health and rights (SRHR) continues to be a major public health challenge in sub-Saharan Africa, especially for adolescent girls. Sub-Saharan Africa has the world's highest level of adolescent birth rates, which poses severe consequences to the health and development of young girls. This study interrogates the limitations and dilemmas of information dissemination on sexual and reproductive health and rights in sub-Saharan Africa. The study uses secondary information that includes UN agency reports, government reports, theses, and journals published in the last decade. In the last ten years, sub-Saharan Africa has witnessed an astronomical lap of HIV cases and other sexually transmitted infections. It emanates from mater data engagement that, More and more, adolescents and young people face increasing pressure about sex and sexuality, including conflicting messages and norms due to lack of adequate information, skills, and awareness on their rights, especially around sex, sexuality and gender expectations. In most countries, less than half of the population, mostly those living in major urban centers, have access to health services. lack of political leadership and commitment to funding (SRHR) policies and programs and dominant-negative cultural framing of women's issues present the major obstacles to operationalizing (SRH) rights. Gender gaps are large with little evidence of change in gaps in age at sexual debut and first marriage, resulting in adolescent girls remaining particularly vulnerable to poor sexual health outcomes. Hence, these persistent disparities suggest the need for multisectoral approaches, which address the structural issues underlying poor (ASRH), such as education, poverty, gender-based violence, and lack of economic opportunity.

41

## Systems Strengthening to increase capacity in Institutions of Rehabilitation to test and treat HIV and co-morbidities among Juveniles in conflict with the law.

Sisa Munkombwe Hatwiinda<sup>1</sup>, Clement Nchimunya Moonga<sup>1</sup>, Moomba Thorncroft<sup>1</sup>, Tamiwe Kabaghe<sup>1</sup>, Tamara Zgambo<sup>2</sup> Mary Kagujje<sup>1</sup>, Monde Muyoyeta<sup>1</sup>

<sup>1</sup>Center For Infectious Disease Research In Zambia (CIDRZ), Lusaka, Zambia, <sup>2</sup>Zambia Correctional Service (ZCS)

**Background:** Globally, and in Zambia, incarcerated young people under the age of 19, referred to as juveniles, represent a highly vulnerable group susceptible to sexual violence, transactional sex, exposure to infectious diseases, trauma and manipulation. These issues are compounded when incarcerated in overcrowded adult facilities with high prevalence of HIV, STIs and TB as well as limited access to health services. We describe a collaboration between the Zambia Correctional Service (ZCS), the Department of Social Welfare (DSW) under the Ministry of Community Development and Social Services (MCDSS) and the Centre for Infectious Disease Research in Zambia (CIDRZ), to build the capacity of ZCS and DSW to provide sustainable, holistic and integrated health services to juvenile offenders in 13 facilities across seven provinces in Zambia.

**Materials and Method:** Screening and testing spaces were created in all facilities, that were then left to be managed by Ministry of Health (MOH) counselors. Inmate peer educators and selected correctional officers were trained as members of Correctional Health Committees (CrHC) to assist with sensitization for HIV, TB, Syphilis and Hepatitis B. In facilities holding both juveniles and adults, adult inmates and officers were also offered HIV, TB and Syphilis testing. All testing and treatment followed national guidelines and all that tested positive to any of the diseases screened for were linked to treatment services within 1-2 days. HIV and TB testing were offered through entry and mass screening at each facility. Where contact with parents or guardians of juveniles under 15 years was possible, consent was requested prior to testing. Where parental contact was not possible, the head of the holding facility provided consent. Due to inadequacy of test kits for Syphilis and Hepatitis B, Syphilis testing was prioritized for known HIV positive individuals and Juveniles while Hepatitis B testing was only offered to Juveniles.

**Results:** A total of 559 juveniles (23 between 10 and 14 years and 536 between 15 and 18 years) were tested for HIV and its associated co-morbidities mentioned above. 3.6% (20/559) tested positive for HIV, all of which were between the ages of 15 and 18 years. 2.0% (11/559) tested positive for syphilis and 0.72% (4/559) tested positive for TB and were all treated. 4.5% (25/559) tested positive for Hepatitis B. Among those who tested HIV positive, 5% (1/20) was co-infected with syphilis and 5% (1/20) with Hepatitis B. There was no TB/HIV co-infection. All 20 (100%) who tested positive for HIV were commenced on ART.

**Conclusion:** The program specifically designed to sustainably be run by the existing correctional health system proved feasible and effective in identifying juveniles with HIV and other infectious diseases. Early detection of these infections may prevent future HIV infections and provide juveniles (often alienated prior to incarceration from traditional health services) a positive experience of engaging with the health system.

42

## Adolescent perspectives on HIV status disclosure to older children and adolescents

Mugo C<sup>1</sup>, Njuguna I<sup>1</sup>, Beima-Sofie K<sup>2</sup>, Mburu C<sup>3</sup>, Onyango A<sup>3</sup>, Itindi J<sup>4</sup>, Richardson B<sup>2</sup>, Oyiengo L<sup>5</sup>, John-Stewart G<sup>2</sup>, Wamalwa D<sup>3</sup>

<sup>1</sup>Kenyatta National Hospital, Nairobi, Kenya, <sup>2</sup>University of Washington, Seattle, United States, <sup>3</sup>University of Nairobi, Nairobi, Kenya, <sup>4</sup>Kenya Medical Research Institute, Nairobi, Kenya, <sup>5</sup>Ministry of Health, Nairobi, Kenya

**Introduction:** Adolescents and young adults living with HIV (ALHIV) often have challenges with when and how they are informed of their HIV status (disclosure). There are limited data regarding ALHIV perceptions and preferences regarding disclosure.

**Methods:** Among ALHIV attending 20 clinics in Kenya as part of an ongoing cluster randomized trial, a convenience sample completed an anonymous survey on their HIV disclosure experience (including socio-demographics, disclosure experiences, preferences, and support. ALHIV on ART  $\leq 15$  years, or disclosed to by family were considered perinatally infected. Satisfaction was classified using a Likert scale (1-very satisfied; 4-not satisfied). We used linear regression to assess factors associated with satisfaction with the disclosure process, and binomial regression for factors associated with disclosure readiness, accounting for clustering by facility using cluster bootstrapped t-statistics.

**Results:** Of 375 ALHIV enrolled, 258 (69%) were female, median age was 18 years (IQR: 15-21) and 265 (71%) were perinatally infected. Disclosure occurred within the last year among 41 (11%) and  $\geq 5$  years ago among 193 (52%) of ALHIV. Disclosure was primarily conducted by healthcare workers (HCWs) (214 [57%]) and family members (145 [39%]). Fifteen (4%) ALHIV discerned their HIV status on their own. Over half (182 [53%]) preferred caregivers perform disclosure, and 266 (75%) preferred full disclosure by age 12. Overall, 275 (73%) ALHIV reported they were ready for disclosure at full disclosure, and 274 (83%) were satisfied with the process; many felt supported by clinic (64%) or caregivers (64%) pre-disclosure and post-disclosure ( $>75\%$  for each). Lower pre-disclosure clinic support (mean difference: 0.19 [95% confidence interval: 0.05-0.33]), pre-disclosure caregiver support (0.18 [0.06-0.30]) and post-disclosure caregiver support (0.17 [0.03-0.31]) were associated with lower satisfaction with the disclosure process. Lower pre-disclosure preparation by clinic was associated with lower disclosure readiness (prevalence ratio: 0.86 [0.77-0.97]). ALHIV reported that disclosure positively influenced their ART adherence (77%), clinic attendance (42%), safer sex (33%) and disclosure to others (57%).

**Conclusion:** ALHIV preferred HIV disclosure be done prior to age 12 with clinic and caregiver support and felt disclosure helped them better engage with their own HIV care. Interventions to improve pre-and post-disclosure support should be prioritized.

43

## Optimizing disclosure of HIV status to a diverse population of children at an urban Pediatric HIV Clinic in the Southeastern United States

Desai N<sup>1</sup>, Carlucci J<sup>2</sup>, Howard L<sup>1</sup>, Johnson D<sup>1</sup>, Spencer H<sup>1</sup>, Garguilo K<sup>1</sup>, Wilson G<sup>1</sup>, Dantuluri K<sup>3</sup>

<sup>1</sup>Vanderbilt University Medical Center, Nashville, United States, <sup>2</sup>Indiana University Medical Center, Indianapolis, United States, <sup>3</sup>Levine Children's Hospital, Charlotte, United States

**Background:** Successful, early, and non-traumatic disclosure of a young person's human immunodeficiency virus (HIV) status is associated with better medication adherence, retention in care, and decreased mortality. The purpose of this project was to increase the proportion of children living with HIV (CLWH) >10 years of age who undergo disclosure about their HIV status. The secondary goal was to ensure documentation of disclosure status and/or disclosure plans in the medical records of CLWH.

**Methods:** A quality improvement (QI) project was initiated at an urban pediatric HIV clinic in the Southeastern United States between July 2018 and March 2020. The primary outcome measure was the proportion of CLWH >10 years of age who are disclosed about their HIV status. The proportion of undisclosed CLWH who have documented disclosure status was also assessed as a process measure. Plan-Do-Study-Act (PDSA) cycles for change included monthly clinic staff check-ins to discuss new disclosures, quarterly team meetings to discuss strategies to improve disclosure, and modifying a clinic note template to prompt providers to document disclosure status for CLWH. Annotated run charts were used to analyze the data.

**Results:** Prior to the first PDSA cycle, 26/46 (57%) of the CLWH >10 years of age were disclosed about their HIV status, and none of the undisclosed children had disclosure status documented in their medical record. After twenty months and six PDSA cycles, the proportion of CLWH >10 years of age disclosed to about their HIV status increased to 80% and the proportion of undisclosed CLWH with documentation of their disclosure status increased to 100%. The greatest increases in disclosure and documentation were seen after implementation of clinical team meetings and a modified clinic note, respectively.

**Conclusions:** Several interventions integrated throughout the pediatric HIV care team and process were associated with an increase in the proportion of CLWH with HIV disclosure and documentation of disclosure status. Potential benefits of documenting disclosure status were to facilitate the disclosure process and to mitigate unintended disclosure.

Abstract 44 is withdrawn.

45

## Intersectional stigma and HIV testing practices and preferences among urban refugee and displaced adolescents and youth in Kampala, Uganda

Logie C<sup>1</sup>, Okumu M<sup>2</sup>, Hakiza R<sup>3</sup>, Mwima S<sup>4</sup>, Kyambadde P<sup>5</sup>, Gittings L<sup>1</sup>, Baral S<sup>6</sup>

<sup>1</sup>University Of Toronto, Toronto, Canada, <sup>2</sup>University of North Carolina Chapel Hill, Chapel Hill, US, <sup>3</sup>Young African Refugees for Integral Development, Kampala, Uganda, <sup>4</sup>Ugandan Ministry of Health, Kampala, Uganda, <sup>5</sup>Mulago Hospital, Kampala, Uganda, <sup>6</sup>Johns Hopkins University Bloomberg School of Public Health, Baltimore, US

**Introduction:** Globally over half of forcibly displaced persons are under 18 years old, and most live in urban contexts. Uganda hosts 1.3 million refugees, 60% are under 18 years old. Although youth's HIV exposure may be exacerbated in humanitarian contexts, HIV testing experiences for this population are understudied. We explored experiences and perspectives towards HIV testing strategies, including HIV-self testing, with urban refugee and displaced youth in Kampala, Uganda.

**Methods:** We implemented a qualitative study with urban refugee/displaced youth aged 16-24 living in Kampala's informal settlements. We conducted five focus groups, including with: men (n=1: ages 16-19; n=1: ages 20-24), women (n=1: ages 16-19; n=1: ages 20-24), and sex workers (n=1; ages 16-24). We also conducted five key informant interviews with humanitarian actors, refugee agencies, and HIV service providers working with refugees in hospitals/clinics. We conducted thematic analysis to understand HIV testing experiences, perspectives and recommendations.

**Results:** Participants (n=49) included young men (n=17) and young women (n=27) from the Democratic Republic of Congo (n=29), Rwanda (n=11), Burundi (n=3), and Sudan (n=1), in addition to five key informants. Participant narratives revealed stigma drivers included: fear of HIV infection; social judgment targeting people living with HIV, adolescent sexual activity, sex work, and refugees; and misinformation that HIV is a 'Ugandan illness'. Stigma facilitators included legal precarity regarding sex work, same-sex practices and immigration status. These manifested in anticipated community-level stigma and healthcare stigma that reduced engagement in clinic-based HIV testing. Participants expressed high interest in HIV self-testing. They recommended HIV self-testing implementation strategies be peer supported and expressed concerns regarding sexual and gender-based violence with partner testing with this population.

**Conclusions:** Intersecting stigma rooted in inequitable social and gender norms, misinformation, and legal precarity constrain current HIV testing strategies with urban refugee youth. Findings align with the Health Stigma and Discrimination Framework that conceptualizes stigma drivers and facilitators that are marked on intersecting health conditions and social identities and limit the right to health. Findings can inform multi-level strategies to foster enabling HIV self-testing environments with urban refugee/displaced youth, including tackling intersecting stigma, leveraging peer support, and applying trauma and violence-aware approaches.

46

## Retention in Care Among Perinatally Infected Youth Living in But Born Outside the United States: Implications for Local Epidemic Control

Desai N<sup>1</sup>, Carlucci J<sup>2</sup>, Patel N<sup>3</sup>, Zannoni B<sup>4</sup>, Hussen S<sup>5</sup>, Doraivelu K<sup>6</sup>, Pierce L<sup>6</sup>, Ahonkhai A<sup>1</sup>

<sup>1</sup>Vanderbilt University Medical Center, Nashville, United States of America, <sup>2</sup>Indiana University School of Medicine, Indianapolis, United States of America, <sup>3</sup>St. Jude Children's Research Hospital, Memphis, United States of America, <sup>4</sup>Emory University Medical School, Atlanta, United States of America, <sup>5</sup>Emory University Rollins School of Public Health, Atlanta, United States of America, <sup>6</sup>Vanderbilt Institute of Global Health, Nashville, United States of America

**Background:** Perinatally HIV-infected youth (PIY) born outside the United States (US) account for the majority of children living with HIV in the US. Despite the importance of this population for control of the US epidemic, there are few data characterizing retention among PIY born outside the US.

**Methods:** We conducted a retrospective cohort study of PIY born outside the US receiving care at three pediatric HIV clinics in the Southeastern US between October 2018 and October 2019. The primary outcome was retention in care ( $\geq 2$  HIV medical appointments  $>60$  days apart during the 1-year follow-up). Predictors of interest were age ( $<15$  vs.  $\geq 15$  years), adoption status (international adoptee vs. non-adoptee [refugee, immigrant, etc.]), and disclosure status (fully disclosed vs. partial disclosure vs. undisclosed). Analysis of disclosure status was restricted to youth  $\geq 12$  years. Multi-variable logistic regression was used to test for associations with retention in care.

**Results:** The cohort included 99 PIY. Median age was 14 years [IQR 12–18 years], and 61% were female. Most youth (69%) were born in Africa. International adoptees comprised 78% of the cohort. Overall 72% of patients were retained in care during the follow-up period. Among adolescents  $\geq 15$  years 66% were retained compared to 79% of those  $<15$  years [aOR 0.55, 95%CI 0.20–1.51]. Three-quarters of adoptees were retained compared to 68% of non-adoptees [aOR 1.10, 95%CI 0.38–3.15]. Among the 80 patients  $\geq 12$  years, 75% were fully disclosed of their HIV status, 14% were partially disclosed, and 11% had not started the disclosure process. Proportion retained and odds of retention among those who were fully disclosed (reference), partially disclosed, and undisclosed were 68%, 91% [aOR 2.75 95%CI 0.29–25.91], and 56% [aOR 0.19 95%CI 0.02–1.144] respectively.

**Conclusions:** PIY born outside of the US are a heterogeneous group, and retention in HIV care varied between sub-groups in this cohort. However, no statistically significant associations with retention were observed. Larger studies are needed to determine whether patient characteristics such as age, adoption status, or disclosure status can be leveraged to improve retention and other important outcomes.



## Are adolescents and young people still vulnerable to HIV? Findings from a secondary analysis of key HIV indicators in Zimbabwe

Pierotti C<sup>1</sup>, Nesara P<sup>1</sup>, Senzanje B<sup>1</sup>, Sithole <sup>2</sup>, Ncube G<sup>2</sup>, Chikwore I<sup>2</sup>

<sup>1</sup>Unicef, Harare, Zimbabwe, <sup>2</sup>MOHCC, Harare, Zimbabwe

**Introduction:** To end AIDS among adolescents by 2030, Zimbabwe has scaled up adolescent-friendly interventions including age and sex disaggregated data. However, data utilization is still low. UNICEF with Ministry of Health conducted a secondary analysis of key HIV indicators among adolescents and young people (AYP) to develop strategies targeting those points in the HIV programme cascade with appropriate information and services.

**Methodology:** in February 2020, a retrospective and cross-sectorial analysis of data on thematic areas was conducted using programme data (2015-2019) and national surveys.

**Results:** basic HIV knowledge was 97% (no difference between sex and age), comprehensive knowledge was <55% (41.4% in 15-19 vs. 54% in 20-24; 55% males vs. 41.4% female), and multiple concurrent partnerships was higher in 20-24 and in male, exposing AYPs to HIV through risky sexual behaviours. More female (39% in 15-19; 70% in 20-24) than male (27% in 15-19; 50% in 20-24) were HIV tested due to high EMTCT coverage. Differences in prevalence were evident as age increased, disproportionately affecting women: 1% boys and girls 10-14; 1% males vs. 3% females in 15-19; 2% males vs. 4% females in 20-24. Proportion of deaths was however alarmingly high in males. The proportion of AYP newly initiated on ART was 71.1% (57% female vs. 43% male) and viral suppression was 68.9%, significantly lower than the 90% targets. However, retention was higher among males (76.6%) than females (63.2%).

**Lesson learnt:** Analysis of the AYPs' uptake of HIV services demonstrates substantial drop-offs at each step in the HIV cascade. High infections and high-risk factors among females are of concerns. Despite declining trends in deaths, reasons for high death rate among males need to be investigated. Accelerated efforts are needed to sustain investments already made and address final gaps focusing on geographical, age/sex inequality. Further disaggregation by urban and rural is needed to identify local level issues. Lack of data and targets for the 10-14 presents serious impediments to monitoring progress for this age group. In depth qualitative assessments are urgently needed to complement the quantitative data to ensure interventions can comprehensively address the unique needs of the AYP.

48

## Evaluation of the knowledge and use of HIV self testing among adolescents and young people in Nigeria

Onwe E<sup>1</sup>

<sup>1</sup>Foundation for Better Health and Human Rights (FBHR), Abakaliki, Nigeria

**Background:** Despite global actions to end AIDS, gaps in HIV testing persist among key populations which negatively affect our ability to reach 90-90-90. HIV self testing (HIVST) is an innovation that is intended to reduce gaps in HIV testing and could serve adolescents and young people (AYP) who because of privacy, stigma, discrimination, or other barriers do not use facility-based, standard HIV testing. This study purpose is to understand the knowledge, availability and uptake of HIVST, in order to maximize testing and especially the use of self-testing among AYP in Nigeria.

**Methods:** The study was conducted between March and September 2019 among 800 AYP in the 5 states (Abia, Anambra, Ebonyi, Enugu and Imo State) that makeup Southeastern region of Nigeria. Participants were selected through respondent-driven sampling and were interviewed using a standard questionnaire about knowledge and use of HIVST. Data was analyzed using SPSS 23.0. Descriptive statistics were calculated and presented as frequencies and percentages.

**Results:** Of 800 study participants, 90% had no idea what HIVST is. Only 10% knew what HIVST is all about. Among these, only 8% have actually seen and used the HIVST Kit while 92% had no idea what it looks like. Also, 30% and 23% got the information about HIVST from friends and local NGOs respectively, whereas the remaining 47% were informed through social media. In terms of willingness to use HIVST kits, 76% were willing to use this innovation because it is simpler and easier. The remaining 24% wouldn't use it because the test might not show the actual result or they would not be able to manage the test result on their own and would need a counselor to support them during the test.

**Conclusions:** AYP in southeastern Nigeria are not well informed about HIVST and should therefore be the focus of increased awareness to the key populations. During the study, participants expressed concerns on the need for support at the time of testing. It is important that HIVST interventions also find ways to provide support to participants who test for HIV given their concerns about learning their results alone.

49

## Adolescent experiences of and recommendations for healthcare services in the GAP Year Trial, Gauteng, South Africa

Kutywayo A<sup>1</sup>, Gordon K<sup>1</sup>, Yah C<sup>1</sup>, Mokgowa T<sup>1</sup>, Mabetha K<sup>1</sup>, Mahuma T<sup>1</sup>, Naidoo N<sup>1</sup>, Mullick S<sup>1</sup>

<sup>1</sup>Wits Reproductive Health and HIV Institute, Johannesburg, South Africa

**Background:** South African adolescents are vulnerable to HIV, pregnancy, and violence. However, uptake of healthcare services is low, with barriers to accessing care. Although national Adolescent and Youth Friendly Service guidelines exist, implementation is inconsistent. Understanding adolescent's healthcare experiences is critical to identify gaps and strengthen service provision.

**Methods:** GAP Year (Girls Achieve Power) is a 2-year sexual and reproductive health and rights (SRHR) intervention, in 26 high schools (12 in Gauteng) between February 2018 – August 2019, with 4 components: afterschool intervention, parent intervention, school safety and linkage to care. A paper-based, mixed-methods linkage to care survey was conducted among willing Gauteng participants in 6 schools (February – April 2019), exploring self-reported healthcare experiences and recommendations for service improvements. Data was analysed descriptively and thematically to better understand adolescent healthcare experiences.

**Results:** Of the 789 who were part of the afterschool intervention, 252 (32%) completed the survey: 61% female, mean age 15 years. A third (34%, 83) had visited a clinic in the last 3 months: 17% (36) for HIV Testing Services, 15% (32) for counselling, 32% (73) for Other services, 9% (20) VMMC, 9% (19) contraception, 8% (17) STI treatment, 3% (6) GBV, 1% (3) antenatal. Most common reason for visiting that facility was proximity to home (34%), the kind nursing staff (12%) or the free Wi-Fi (12%). Most (46%, 92) liked their last clinic visit; 20% (39) did not. Friendly, welcoming staff and participants' health needs being met played key roles in a positive facility experience, whilst long queues, negative staff attitudes and poor service quality negatively impacted their experience.

**Recommendations:** Participants offered the following suggestions: improve quality and speed of services (shorter queues, more staff), encourage positive staff attitudes towards adolescents, availability of Wi-Fi, younger nurses, ensuring age-appropriate areas (specifically for the elderly and pregnant women), improve access to the facility (transport, proximity to home), make more conducive facility environment (clean, chairs) and increase types of services under one roof.

**Conclusions:** This offers practical suggestions on how healthcare services can be strengthened. The use of the national Adolescent and Youth Friendly Services toolkit could support this.

50

## **Socio-demographic characteristics and prior sexual experiences with telling influences on willingness to take HIV tests: A case study of adolescents and young people in a border-lying rural community**

**Makoni K<sup>1,2</sup>, Hlongwana K<sup>1</sup>, Katsande R<sup>3</sup>**

<sup>1</sup>University of KwaZulu-Natal (UKZN), Durban, South Africa, <sup>2</sup>Africa Community Development and Research Center (ACDRC), Harare, Zimbabwe, <sup>3</sup>Youth Empowerment and Transformation Trust (YETT), Harare, Zimbabwe

Without doubt, HIV management programs that are informed by evidence from consistent HIV testing and retesting of clients are more effective in containing the spread of HIV than those implemented apart from HIV tests.

Knowledge of one's HIV status, whether positive or negative, inspires positive behavior change, namely through seeking early treatment and care or consistently practicing protected sex respectively.

Therefore, efforts to increase access of clients to health facility-initiated HIV tests and self tests have intensified, with high burden countries such as Zimbabwe investing heavily into HIV test kits and allied awareness campaigns. However, various factors on both the demand-side and supply-side of healthcare have made it difficult to attain the targeted 90% of the population who know their HIV status.

A case study was therefore carried out on a sample of 329 young people aged 15-35 years in Zimbabwe's Mangwe District, which lies along Zimbabwe's border with Botswana where busy human migration and interaction is rampant. Zimbabwe's National AIDS Strategic Plan (ZNASP) counts border-lying communities among hot spots as far as the spread of HIV is concerned.

A retrogressive analysis of the young people's sexual behavior vis-à-vis their willingness to take HIV tests was done within a cross-sectional case study design that used mixed research methods (a quantitative survey combined with in-depth interviews and focus group discussions). The study generally showed that the socio-demographic characteristics of young people at the time of engaging in sexual activity determined whether sex would be safe or risky through social dynamics of sexual manipulation or exploitation.

Those experiences and consequent perceptions of risk or safety created such negative or positive mental states as fear, anxiety, low or high self-confidence, hopefulness or hopelessness and so forth, which tellingly determined one's inclination to take HIV tests or to refrain. Perception of risk in prior sexual activities (e.g., having sex with multiple partners and/or without a condom) was found to be associated with unwillingness to take HIV tests and vice versa. This was interpreted to indicate that messages to promote HIV testing can be reasonably effective if they address fears emanating from prior sexual experiences.

## Adolescent and Youth Engagement and Partnership in the Development of a Global Adolescent and Youth Living with HIV Transition of Care Toolkit

Simelane M<sup>1</sup>, Mahlasera R<sup>2</sup>, Ochieng J<sup>3</sup>, Asiimwe Odetta B<sup>4</sup>, Harelimana I<sup>4</sup>, Mugumya L<sup>4</sup>, Ginindza M<sup>1</sup>, Lenz C<sup>5</sup>, Rakhmanina N<sup>5</sup>, Ombija M<sup>5</sup>

<sup>1</sup>Elizabeth Glaser Pediatric AIDS Foundation Eswatini, Eswatini, <sup>2</sup>EGPAF Zimbabwe, Harare, Zimbabwe, <sup>3</sup>EGPAF Kenya, Homa Bay, Kenya, <sup>4</sup>EGPAF Uganda, Uganda, <sup>5</sup>EGPAF Global, Washington D.C, United States

**Background:** Various transitions in care are associated with worsening retention and outcomes among adolescents and youth living with HIV (AYLHIV). The Elizabeth Glaser Pediatric AIDS Foundation (EGPAF), with support from Johnson & Johnson and the New Horizons Collaborative, developed the Transition of Care Toolkit to provide practical guidance and tools to support healthcare workers, children, AYLHIV, and their caregivers/treatment supporters, in successfully navigating diverse transitions in care. EGPAF's Committee of African Youth Advisors (CAYA), comprised of AYLHIV (15-29 years) from 11 sub-Saharan African countries, provided critical review and feedback throughout the development of the toolkit.

**Methods:** CAYA members participated in the technical working group to develop the toolkit and completed a survey on the experiences and perspectives around support for AYLHIV throughout transitions. CAYA members also led a panel discussion on transitions in HIV care at an international workshop and participated in the stakeholder consultation and site visits in Uganda to gather feedback and finalize the toolkit.

**Results:** CAYA members from seven countries (Uganda, Eswatini, Zimbabwe, Kenya, Cameroon, Democratic Republic of Congo, Malawi) gathered evidence and client-level feedback on the transitions (clinical, prevention of mother-to-child transmission, school, service delivery models) in care and developed guidance for HCWs and AYLHIV in navigating changes and HIV self-management. CAYA members delineated the reality and frequency of transitions between homes, caregivers, and discussed challenges that are incorporated into the guidance with a novel checklist for new caregivers of ALHIV. Throughout field experience and stakeholder engagement, CAYA AYLHIV re-framed transition from being a construct of age to being a more continuous, life experience-driven occurrence, and incorporated this proactive approach into the guidance and toolkit.

**Conclusions:** AYLHIV engagement is a critical, feasible element of program or technical resource development that was intentional and highly productive for our toolkit. Partnering with AYLHIV to develop the toolkit resulted in a comprehensive, representative, and AY-responsive resource designed to fill a recognized gap in the continuum of care for children and AYLHIV and their caregivers/supporters.

52

## Using U-Report to Assess Awareness Levels and Protective Behaviour Towards Covid-19 Among Adolescents and Young People in Botswana

*Kelapile T<sup>1</sup>, Chuwa V<sup>1</sup>, Moatswi D<sup>1</sup>, Masire T<sup>1</sup>, Chukwudozie A<sup>1</sup>, Mark Prahbu S<sup>1</sup>, Tswetla N<sup>2</sup>, Ng'ombe K<sup>2</sup>*

*<sup>1</sup>UNICEF, Gaborone, Botswana, <sup>2</sup>NAHPA, Gaborone, Botswana*

**Background:** The COVID-19 pandemic has had a far-reaching impact on the lives, lifestyles, and livelihoods of Adolescents and Young People (AYP) in Botswana. Before the country registered any cases, there was existing fear, uncertainty, and misinformation surrounding the novel COVID-19 as it was already prevalent in neighbouring South Africa. UNICEF, MoHW, and NAHPA sought to explore AYPs awareness levels of COVID-19 and to determine their assessment of protective behaviour so that effective messaging could be developed to increase preventive behaviour in order to curb the spread of the virus as soon as cases started to get confirmed.

**Method:** In March 2020, a U-Report poll was conducted amongst pre-registered participants known as U-Reporters. The poll questions were developed and sent to them through SMS with no cost to the respondents. The questions assessed their understanding of the signs and symptoms of COVID-19, their practice of protective behaviour, and their information source preferences.

**Results:** The poll surveyed 2,124 respondents between the ages of 15-24. 83% were aware of COVID-19 and 96% knew the signs of the virus. 95% of them knew what to do if they were showing signs of having COVID-19. 89% were aware of various social distancing practices and 96% knew how the virus was spread. They also identified TV, radio and social media as their top preferred channels of receiving information on COVID-19. In addition, we received about 90 unsolicited messages where people reached out with questions and concerns, including how to access ARVs during lockdowns, how COVID-19 affects people living with HIV, and requests for more information on COVID-19.

**Conclusions:** Based on the responses, MoHW and NAHPA were able to develop key messages targeted to AYP which were sent regularly via SMS and social media platforms. UNICEF also developed a U-Report WhatsApp platform to host the COVID-19 Information Awareness Hub to enable AYP access information easily, which the poll responses helped to inform. UNICEF is also bringing CSOs on board as U-Partners to respond to messages from AYP and link them to appropriate services.

53

## LESSON LEARNED DURING THE COVID-19 LOCKDOWN IN A YOUTH PROGRAMME AT A RESEARCH CLINIC IN MBEKWENI: ADDRESSING SOCIETAL AND COMMUNITY NORMS IMPACTING YOUTH'S WELL-BEING.

Dada T<sup>1</sup>, Ketelo P<sup>1</sup>, Bonakele N<sup>1</sup>

<sup>1</sup>Be Part Yoluntu Centre, Paarl, South Africa

**Description:** Young people (both HIV-infected and affected) remain vulnerable to sexually-transmitted conditions given societal prejudices which are enhanced through myths and misinformation surrounding gender stereotypes and sex. These societal and community norms in the Mbekweni community are the root causes of young people's inability to overcome these obstacles towards making better choices. The key is anchored in an approach that it is 'better together'; making new norms that are protective and promote wellbeing.

### Aims:

The original aims of the Be Part Youth Club - which continued during Covid19, include:

- improved understanding of HIV prevention measures and self-testing;
- increased treatment adherence;
- positive peer support and leadership development;
- reaching out to others in need;
- finding own solutions to enable making better choices.

### Models:

During the Covid-19 lockdown, youth group sessions, previously attended by adolescents twice weekly were transformed into:

- WhatsApp group activities e.g. letter to the President;
- prior knowledge assessments – through chats on WhatsApp;
- making posters and lifestyle maps; posted on WhatsApp. This enabled staff to evaluate individual psycho-social wellbeing / living conditions and which promoted youth's abilities to start dreaming of a future, despite a pandemic;
- a family matters programme comprising contact sessions with parents to promote communication between them and their children.

### Lessons learned:

We have learned that:

1. Establishing new norms requires listening to the individual young voices and providing spaces for each individual to speak out.
2. An indirect consequence of their voicing a multitude of previously silent thoughts means that members of the group are better able to think about making better choices.
3. A larger group of young people can be reached by using of social media – more than attendance at earlier face-to-face sessions.
4. Instead of stopping our work with the youth, the lockdown has asked us to be innovative and creative and change the way we support the youth. Staff have found the challenge of change stimulating and productive.
5. Change in a time of crisis can be a valuable stimulus, providing power to confront old and outdated ways and norms.

54

## Street/Interactive Theatre to Promote quality HIV/AIDS Prevention education and Sexual Reproductive Health Awareness

Hanif F<sup>1</sup>

<sup>1</sup>Ehealthplanning, Lahore, Pakistan

**Background/ Current Status:** Sexual Reproductive Health is an important pillar of the human rights framework and the average **Results** in this thematic area is poor reflector about the general human rights situation in Pakistan. Mostly people feel nervousness when the topic of SRH discussed because cultural norms supposed that HIV/AIDS, Family Planning and Sexual health is not an appropriate thing to discuss, which consequently restricts people's choices in this matter. In the context of Pakistan there are very few programs were launched to address the issues of young people's Health, Mostly the programs of government targets only "married couples" in terms of reproductive health information but I think they should consider the unmarried persons too. According to the 'The National Strategic Framework on HIV/AIDS young people are considered as main concern because the deprived youth is the biggest target of HIV/AIDS as they get involved in different high risk activities. The reason behind this is lack of information regarding sexual reproductive health rights.

**Method:** Reviewing youth policy, population policy and health policy and meetings with Gov. Officials and concern departments to highlight issues regarding Population growth and growth numbers of people living with HIV and incorporate their perspective/ recommendation. Organizing awareness session in grass root level community on HIV prevention and sexual reproductive health rights and Poverty, trained 150 young Peer Educators both male and female including Sexual Gender Minorities for the basic awareness on use of contraception. The project aims to spread awareness among young people living in rural and urban areas about HIV Prevention, their Sexuality Rights through Street-Theatre. The methodology used. Conducting pre-performances sessions to brainstorm and to create a comfortable and conducive environment with the local people to change their Attitude, Perception and mind set regarding Sexuality and HIV/AIDS. Conducted theatre performances on HIV/AIDS and Sexual reproductive health and rights.

### Results:

- 1) More than 5000 young people were directly educated and given the right education about HIV/AIDS prevention and Sexual Reproductive Health and Rights through using theater as an amazing and effective tool.
- 2) Through our direct beneficiaries we are continuously approaching in-direct beneficiaries along with the proper education of HIV/AIDS prevention and Sexual Reproductive Health and Rights.
- 3) This has now become a huge campaign here in Punjab as media, some educational institutes and other people supported the cause and it is till building huge.
- 4) to sensitize the young people about the information of sexual reproductive health and rights; therefore, I decided to design this particular intervention ehealthplanning

**Conclusions:** Theatre in such communities proved to be the most effective tool, because through theatre most sensitive issue can be addressed and understood in an organized way, everyone not only people enjoyed or understood the issue, they agreed to disagree with the concepts they were living with, they can make decision about their life and health matters. In Rural is very much need of awareness regarding family planning use of contraception. Community acceptance on contraception is also big challenge in Punjab. People feel fear from HIV/AIDS and did not agree for HIV Test. People feel shy to purchase condom. if we talk about Family planning methods high majority of men refuse to take any men related method because "this is a matter of masculinity", mostly women sacrificed for family planning method even her health condition do not accepted.



55

## Tackling a new opponent: Rapid assessment of a sport-based COVID-19 prevention curriculum

DeCelles J<sup>1</sup>, Dube D<sup>2</sup>, Pasquini C<sup>3</sup>, Lee D<sup>1</sup>, Coakley C<sup>1</sup>

<sup>1</sup>Grassroot Soccer, Inc., Hanover, United States of America, <sup>2</sup>Grassroot Soccer, Inc., Johannesburg, South Africa, <sup>3</sup>UNICEF Office of Research - Innocenti, Florence, Italy

**Background:** In order to provide adolescents and youth with age-appropriate, fun, and engaging information and skills to reduce risk of COVID-19 infection and cope with stress, Grassroot Soccer (GRS) developed an open-source, sport-based COVID-19 response curriculum in March 2020. The “SKILLZ COVID-19 Response” curriculum is designed to be modular, adaptable, and implemented either in-person or through remote means. GRS and partners supported translation into seven languages, and the curriculum was downloaded over 600 times from 35 countries. In response to developing evidence and public health guidance, GRS undertook a rapid assessment of the curriculum to inform revisions for a second version in July 2020.

**Methods:** GRS conducted in-depth interviews (n=4) with partner organizations that implemented V1 of SKILLZ COVID-19 Response in Angola, Malawi, Kenya, and Liberia. External experts from WHO and Partners in Health (n=2) conducted curriculum reviews. Post-test questionnaire responses from four countries (n=6) were examined, and the curriculum was reviewed alongside new public health guidance from WHO, CDC, UNICEF, and the University of Pennsylvania.

### Lessons:

In response to review findings, GRS made the following changes to version 2 of the curriculum:

- Guidance from WHO on non-medical masks for the public was incorporated into V2, as well as content on misconceptions around masks and scenario-based discussion prompts.
- Partners appreciated supplemental materials included in V1, so GRS added more example SMSs for implementers to send to participants, posters, and scenarios to discuss.
- GRS re-focused one session of V2 on mental wellbeing, clarified instructions, and updated explanations in response to partner feedback.
- Partners requested a decision-making framework that participants could use to assess risk of common activities. GRS included guiding questions in V2 to help participants reduce risk based on time and intensity of exposure.

**Conclusions:** Results from a rapid assessment of GRS’s SKILLZ COVID-19 Response informed revisions for V2 of the curriculum, making V2 up-to-date with international public health guidance, more responsive to partner and participant needs, and easier to implement in a variety of formats. GRS intends to continue the rapid review process as the pandemic context changes and more evidence becomes available.

56

## **‘It’s like a new life that you never knew about until now’: The CHIVA UK Youth Committee of YPLHIV: How it works and what it achieves**

*Carter A<sup>1</sup>*

<sup>1</sup>*Chiva UK, Bristol, United Kingdom*

Adolescents and Young People living with HIV (A+YPLHIV) are a cohort who face complex challenges. Due to ongoing stigma and confidentiality issues there are barriers to their engagement and they have limited opportunities to shape and influence change and improvements to their care. This can mean clinical care and wider approaches and responses to HIV can lack the critical voice and influence of A+YPLHIV.

CHIVA supports young people with HIV to have a voice. Through the CHIVA Youth Committee (CYC) young people shape and influence clinical care, engage with the media, and influence policy and practice developments.

The CYC comprises 12 A+YPLHIV aged 12-18. CHIVA recruits to the CYC via clinical networks and participants of the CHIVA Support Camp. The structure is fully embedded in CHIVA and the role of Participation Officer is crucial; there is dedicated support for the group and a constant flow of communication. Strict procedures relating to confidentiality, safeguarding and youth centred practice allow this work to flourish.

This presentation addresses the barriers around and opportunities for the meaningful engagement of A+YPLHIV. Participants will understand how to set up and support a youth committee of A+YPLHIV. Participants will learn about 3 examples of CHIVA Youth Committee youth engagement. Participants will explore with the presenter and youth facilitators an idea for youth engagement which they can implement in their own communities.

57

## Young people bridging the leadership gap.

*Micheal S<sup>1</sup>*

<sup>1</sup>*Uganda Network Of Young People Living With Hiv/aids, Kampala, Uganda*

Hello every one! Once again every time we talk of youth bridging the gap of leadership here's what it means and what it takes. I have served as a national representative of the young people living with HIV in Uganda for over a year but I have discovered that Young people need Young people. (PEERS NEED PEERS).

Thus being of great importance if young people themselves took a lead and engage in leadership roles. One of my roles was to ensure YPLHIV have their medication. but how could I ensure this across the country, I had to strengthen a vibrant movement of young people across every region and empowered them to create other sub movements in their areas. Through the motivation I gave them, we have walked on foot, and of recent UN WOMEN came in and supported us with bicycles. THAT IS BEING AN EFFECTIVE LEADER!

After achieving the medication response target, I realised there was need for retention in care because many YPLHIV had started unsuppressing their viral loads. I still engaged my team and asked them to move door to door to provide psychological, and psychosocial support, discovering that due to the lock down, many YPLHIV had lost hopes of living and they had not attended counselling sessions for long. Guess what, we their fellow peers stormed their homes and they freely expressed to us all their concerns of which one of them was poor nutrition.

As a leader it was my mandate to see what next. I can't wait to share with you all the great news that surrounded us when we wrote in request for food. Hey! Young people can be of great change to society and to the people. We are strong, energetic, vibrant, resilient and can do all things through God who gives us strength. Let's take the lead. Leadership starts NOW!

58

## Treatment Outcomes Among Children and Adolescents Living with Human Immunodeficiency Virus (LHIV) in Southeastern Nigeria

Kalu S<sup>1</sup>, Ugochukwu E<sup>1</sup>, Adlamoh H<sup>2</sup>, Anyaoku<sup>1</sup>, Eleje<sup>1</sup>, Ajuba I<sup>1</sup>, Anyabolu<sup>1</sup>, Ezejiakor O<sup>1</sup>, Ugboaja J<sup>1</sup>, Igwegbe A<sup>1</sup>

<sup>1</sup>Nnamdi Azikiwe University Teaching Hospital 1,2,4,5,6,7,8,9 &10, Nnewi, Nigeria, <sup>2</sup>Global Fund (GF) Family Health International (FHI 360) 3, Abuja, Nigeria

**Background:** Globally, Nigeria has the second-largest pediatric and adolescent HIV burden. The primary goal of prescribing Antiretroviral Therapy (ART) to the people living with HIV is to achieve HIV-1 RNA suppression to restore immunologic function, reduce morbidity and mortality, and to improve the overall quality of life. Viral load testing is a standard tool used in monitoring disease progression as well as for the decision to initiate or change ART. We evaluated the rates of HIV viral load suppression among children and adolescents on ART.

**Methods:** This was a prospective, perinatally HIV infected cohort. The demographic information of children and adolescents whose plasma samples were received from over thirty healthcare facilities across southeastern Nigeria at the Nnamdi Azikiwe University Teaching Hospital PCR Laboratory, Nnewi, were entered into the Laboratory Information Management System (LIMS), between January 2016 and December 2018. The Roche CAP/CTM real-time PCR ((Roche, Basel, Switzerland) was used to measure HIV-1 RNA. The virologic outcomes of the clients were also entered into LIMS. We included only participants who have been initiated into ART for one year and above and those with at least two viral load results. A chi-square test was used to determine the statistical significance of the variables.

**Results:** Of the total 296 children and adolescents who were recruited, 58.6% were males. The mean age was 8.95±2.60 and 14.73±1.96 years old for children and adolescents, respectively. Overall, our study cohort achieved a viral load suppression rate of 154 (52.2%). More children (54.7%) were virally suppressed (<1000 copies/ml of blood). The frequency of virologic failures was greater among adolescents (48.8%) than in children (45.2%) - OR 1.149 at 95 C.I 0.694-1.901; X<sup>2</sup> = 0.291; P=0.589. More females were virally suppressed (55.8 %) than their male counterparts (X<sup>2</sup>=1.38, 'P = 0.24). The suppression rates were 40.0%, 54.6 %,52.6,51.4 among 0-5,6-10,11-15, 16-19 years old, respectively (X<sup>2</sup>- 0.0.73; P=0.87).

**Conclusion:** Our cohorts did not achieve the third '90" of the UNAIDS' viral load suppression target for 2020. We recommend that special attention be paid to these vulnerable populations through enhanced adherence counseling, viral load monitoring, improved access to newer antiretroviral drugs, adolescents' friendly service, and peer support to achieve the UNAIDS third "90" global targets for elimination of HIV.

59

## Better, cheaper, more effective: Using a Rapid Cycle Improvement model to improve implementation and outcomes on sport-based VMMC demand creation in Zimbabwe

Moyo B<sup>1</sup>, DeCelles J<sup>2</sup>, Dube P<sup>1</sup>, Dallos A<sup>2</sup>, Lee D<sup>2</sup>, Coakley C<sup>2</sup>

<sup>1</sup>Grassroot Soccer Zimbabwe, Bulawayo, Zimbabwe, <sup>2</sup>Grassroot Soccer, Inc., Hanover, United States of America

**BACKGROUND:** Grassroot Soccer (GRS) developed a once-off, sport-based voluntary medical male circumcision (VMMC) demand-creation intervention called Make The Cut (MTC). Following two randomized controlled trials of MTC demonstrating encouraging evidence of VMMC uptake, GRS has applied a model informed by implementation science to implement MTC in six additional countries with 12 partners. As part of USAID Going the Last Mile, GRS Zimbabwe has partnered with Population Services International (PSI) to implement MTC throughout Harare and Bulawayo with adolescent boys and young men (ages 15-19).

**METHODS:** GRS and PSI followed a Rapid-Cycle Improvement (RCI) model, where they collaboratively reviewed routine monitoring data to respond to successes and challenges and modify the intervention to meet local context. The monthly RCI meetings included analysis of total VMMC uptake, conversion rates, cost-effectiveness, and observations from site staff. VMMC uptake was determined through verification of participant registers with clinic registers; conversion rate was calculated by dividing the number of circumcised participants by total participants; cost effectiveness was calculated by dividing total costs (costs include all direct and indirect programming expenses, including overhead) by total circumcised participants.

**RESULTS:** Over seven months of data collection, analysis of clinic data shows an increase in monthly VMMC uptake (261 VMMCs to 319 VMMCs; +50.2%), an increase in conversion rate (20.1% to 57.1%; + 184.1%), and a slight increase in cost/VMMC ( \$24.33 to \$27.07; +11.3%). Effective data-driven programmatic revisions include the introduction of female mobilizers, provision of demand creation and VMMC services to men after hours at the workplace, and improved communication between outreach workers and clinicians.

**CONCLUSIONS:** GRS and PSI effectively improved monthly VMMC uptake and conversion rate, while additional innovations and research are needed to improve cost effectiveness. The use of monthly RCI meetings can allow for immediate course correction in response to challenges identified through clinic data and observation. Demand creation initiatives should consider following a RCI model to allow implementers and clinicians to continually try out innovative data-driven responses to outcomes. Finally, the use of a RCI model can help adapt and scale evidence-based interventions in real-world settings.

60

## Using treatment as prevention to curb the burden of new HIV infection among young men who have sex with men in Mombasa County

Odira V<sup>1</sup>

<sup>1</sup>HAPA KENYA, MOMBASA, Kenya

**Background:** HIV is an actively replicating microorganism that targets the immune system of the human host. If not properly managed, HIV infection can deteriorate the CD4 cells as it advances to AIDS. To prevent this, it is essential that people who are recently diagnosed with HIV are immediately placed on antiretroviral therapy (ART). This paper addresses the issues of absence of treatment among men who have sex with men (MSM) who are living with HIV in Mombasa county. It also outlines the collective efforts of HIV & AIDS People's Alliance of Kenya (HAPA) to ensure that all MSM and other young gay men within Mombasa County, who tests positive to HIV gets enrolled on treatment.

**Description:** In previous years, young MSM living with HIV in Mombasa county are usually not initiated on treatment immediately because of inefficient services and criminalisation of MSM in Mombasa. This has resultantly increased the prevalence of opportunistic infections and development of AIDS complications. To effectively eliminate this, HAPA Kenya has been able to work with existing HIV clinics to equitably deliver ART to MSM living with HIV. She also initiated client follow ups through support groups, by establishing support groups specifically for the MSM living with HIV. Young MSM who are recently enrolled in treatment had access to counselling services which helped them navigate through adherence, healthy living, psychological issues, and stigma.

**Lessons learnt:** After adopting the intervention strategies listed above, HAPA has been able to enrol a total of 89% clients on ARV as against the 67 that were enrolled in previous years. Of these, 87% have total undetectable viral loads and also the rates of new infections have been reduced by 25%. Also, through our counselling services, young MSM in Mombasa community has been able to improve their sexual behaviours. These analysis shows that using treatment as prevention is efficient towards ending AIDS.

**Conclusion:** It's evident that when clients are put on treatment immediately, they are diagnosed and retained on treatment using the strategies listed above. It significantly helps in viral load suppression hence reduces the risk of passing the virus to other sexual networks as well as reduction in HIV/AIDS related deaths.

## Advancing Responsible HIV/Coinfections Research with Pregnant Adolescents: Perspectives of Southern African Stakeholders

Sullivan K<sup>1</sup>, Jaffe E<sup>1</sup>, Kasule M<sup>2</sup>, Lyerly A<sup>1</sup>

<sup>1</sup>Center for Bioethics, Department of Social Medicine, University of North Carolina at Chapel Hill, Chapel Hill, USA, <sup>2</sup>University of Botswana, Gaborone, Botswana

**Background:** While the needs of adolescents in the HIV and coinfections prevention and treatment research agenda are increasingly addressed, the unique needs of pregnant adolescents remain largely ignored. Adolescents living in sub Saharan Africa face high fertility rates, and while pregnant, face increased risk of HIV seroconversion and higher rates of vertical transmission and maternal and fetal morbidity and mortality compared to adult women living with HIV. Reticence about including pregnant women in research is amplified in the context of adolescents. As a result, significant evidence gaps exist about how to safely and effectively treat and prevent adolescent HIV and coinfections during pregnancy. Understanding stakeholder views regarding evidence gaps and considerations specific to the inclusion of pregnant adolescents in clinical trials is important to inform efforts to responsibly advance the evidence base and equitably meet the needs of this critical population.

**Methods:** We conducted semi-structured interviews and focus group discussions with 70 stakeholders in the HIV research community based in Botswana, Malawi, and South Africa regarding inclusion of pregnant women in the HIV/coinfections research agenda. Participants included clinicians, investigators, ethicists, REC chairs and members, and community advisory board members. Thematic analysis identified concern around pregnant adolescents as an emergent theme for deeper exploration.

**Results:** Participants noted pressing unmet needs of pregnant adolescents in the HIV/coinfections research agenda and barriers to their inclusion in research. Biological and anatomical differences of pregnant adolescents, difficulties accessing and engaging in care, and low adherence to medications among adolescents were identified as underlying an urgent need for research to assess the safety, acceptability, efficacy, and implementation of preventives and treatments. Barriers described included concerns surrounding pregnant adolescents being a vulnerable population, challenges regarding informed consent and emancipation of minors, and confusion surrounding what legal and ethical frameworks allow.

**Conclusions:** Despite recognition of urgent research gaps related to pregnant adolescents and HIV/coinfections, numerous challenges to conducting needed research were identified. Clearer guidance for navigating the complex legal, regulatory and ethical landscape surrounding pregnancy and adolescence is needed to advance the needs of this population in the research agenda.

62

## Knowledge and attitude towards acceptability of male circumcision for HIV prevention among male students at the University of Zambia, Ridgeway Campus.

Mbele W<sup>1</sup>, NDONYO L<sup>1</sup>

<sup>1</sup>University Of Zambia, Lusaka, Zambia

**Background:** Studies have found that male circumcision reduces the risk of heterosexual HIV infection in men by at least 60% (UNAIDS/CAPRISA, 2007). The University of Zambia has an HIV/AIDS Policy that was formulated in response to the need for the creation of a safe, healthy working and learning environment. It came with the realization that HIV/AIDS among students and staff was escalating. Since October 2008, Male circumcision has been added to the health services offered at the University of Zambia clinic, free of charge to students.

**Objectives:** The study assessed Knowledge and attitude towards acceptability of male circumcision for HIV prevention among male students at the University of Zambia, school of medicine, Ridgeway Campus.

**Materials and Methods:** This was a cross sectional study. A total of 150 students were captured using non-probability sampling technique to which a questionnaire was administered.

**Results:** The study established that the majority of students were highly knowledgeable about male circumcision as evidenced by 91.3% of the participants who answered most questions about male circumcision correctly. There was a significant association between knowledge and willingness to undergo circumcision. The study further revealed a generally more positive attitude about male circumcision among the students as evidenced by 80.7% of participants who believed that male circumcision could play a role in the fight against HIV. However, only 48.0% of the participant were circumcised and less than half (46.2%) of those not circumcised were willing to undergo circumcision. More than two third (65.3%) of the circumcised students cited genital hygiene as the reason for their circumcision and fear of pain was the leading obstacle to male circumcision for most (59.5%) students.

**Conclusion:** The overall conclusion drawn from this study was that male circumcision could be the way forward in the reduction of HIV transmission among most heterosexual student partners. This study further established that male circumcision would take long to gain grounds if only correlated with HIV/AIDS reduction since genital hygiene was the major reason of circumcision for most students. Therefore, the study recommends that male circumcision be tackled as an independent entity without being associated with HIV/AIDS.



63

## Multi-level modeling and multiple group analysis of disparities in continuity of care and viral suppression among Nigerian adolescents and youths living with HIV

Badejo O<sup>1,2</sup>, Noestlinger C<sup>2</sup>, Jolayemi T<sup>1</sup>, Adeola J<sup>1</sup>, Okonkwo P<sup>1</sup>, Van Belle S<sup>2</sup>, Wouters E<sup>3</sup>, Laga M<sup>2</sup>

<sup>1</sup>APIN Public Health Institute, Nigeria, Abuja, Nigeria, <sup>2</sup>Institute of Tropical Medicine, Antwerp, Belgium, <sup>3</sup>University of Antwerp, Antwerp, Belgium

**Introduction:** Substantial disparities in care outcomes exist between different sub-groups of adolescents and youths living with HIV (ALHIV). Understanding variation in individual and health-facility characteristics could be key to identifying targets for interventions to reduce these disparities. We modeled variation in ALHIV retention in care and viral suppression, and quantified the extent to which individual and facility characteristics account for observed variations.

**Methods:** We included 1,177 young adolescents (10-14 years), 3,206 older adolescents (15-19 years) and 9,151 young adults (20-24 years) who were initiated on antiretroviral therapy (ART) between January 2015 and December 2017 across 124 healthcare facilities in Nigeria. For each age-group, we used multilevel modeling to partition observed variation of main outcomes (retention in care and viral suppression at 12 months post ART initiation) by individual (level one) and health facility (level two) characteristics. We used multiple group analysis to compare the effects of individual and facility characteristics across age-groups.

**Results:** Facility characteristics explained most of the observed variance in retention in care in all the age-groups, with smaller contributions from individual-level characteristics (14-22.22% vs 0 - 3.84%). For viral suppression, facility characteristics accounted for a higher proportion of variance in young adolescents (15.79%), but not in older adolescents (0%) and young adults (3.45%). Males were more likely to not be retained in care (aOR=1.28; p<0.001 young adults) and less likely to achieve viral suppression (aOR=0.69; p<0.05 older adolescent). Increasing facility-level viral load testing reduced the likelihood of non-retention in care, while baseline regimen TDF/3TC/EFV or NVP increased the likelihood of viral suppression.

**Conclusions:** Differences in characteristics of healthcare facilities accounted for observed disparities in retention in care and, to a lesser extent, disparities in viral suppression. An optimal combination of individual and health-services approaches is, therefore, necessary to reduce disparities in the health and wellbeing of ALHIV.

## Innovative management of chronic poor adherence and ART failure in patients on Protease Inhibitors-based regimen

**Mafulu Y<sup>1</sup>**, Dlamini T<sup>3</sup>, Perry S<sup>2,4</sup>, Ntombikayise S<sup>2</sup>, Motsa S<sup>2</sup>, Dlamini S<sup>2</sup>, Kay A<sup>2,4</sup>, Lukhele B<sup>2,4</sup>

<sup>1</sup>Aids Healthcare Foundation, Manzini, Eswatini, <sup>2</sup>Baylor College of Medicine Children's Foundation, Mbabane, Eswatini, <sup>3</sup>Raleigh Fitkin Memorial Hospital, Manzini, Eswatini, <sup>4</sup>Baylor College of Medicine, Houston, United States of America

**Issues:** By the end of 2017, 90% of PLHIV knew their HIV status in Eswatini, 85% were on ART and 74% had their viral load (VL) suppressed, highlighting the need to target the final 90. This is critical for children and adolescents taking a Protease Inhibitor (PI)-based regimen, who have the lowest rates of VL suppression. Some contributors to this statistic seem intractable through routine counselling methods. For this reason, an intensified model of adherence counselling, Challenge Clinic (CC), was designed at Baylor Eswatini. The intervention aims to achieve better virologic and clinical outcomes in patients on PI-based regimens, by addressing medical, psychosocial and economic barriers.

**Description:** In October 2018 we implemented CC at Baylor satellite COE in Manzini. CC is an intensified model of conducting individualized adherence counselling through a multidisciplinary comprehensive care clinic. CC targets patients on PI-based regimens with VLs of >1000 copies/μl. CC patients often have chronic poor adherence usually associated with medication tolerability, psychosocial and economic problems, but may also have PI resistance. To tackle the issues as a whole and avoid “dissecting” the patient by being seen separately by different care providers, the patient and their caregiver are seen monthly by the doctor and social worker together. VL is repeated every 3 months until suppression is reached, or HIV genotype is obtained. Patients are discharged when VL is undetectable.

**Lessons Learnt:** At the end of 8 months 36 patients were enrolled in CC, 63.9 % are male, and the mean age is 12.5 years. Average duration on a PI-based regimen was 3.4 years. 97.2% (n=35) were eligible for a repeated VL and 30.6% of them (n=11) had a suppressed VL (< 200). Among patients with genotypes, 80% demonstrated susceptibility to PIs. These interim results indicate the effectiveness of the intervention. The multidisciplinary nature of the CC gives an impression of the seriousness of the situation for the patient

**Next steps:** This intervention shows promising results in reducing barriers to adherence demonstrated by improved VL suppression. Inclusion of a comparison group to assess the direct effect of CC is needed.

65

## **Making COVID-19 a ‘No Challenge’ in sustaining HIV retention rate for Children and Adolescent Living with HIV in Akwa Ibom, Nigeria**

**Akpan D<sup>1</sup>**, Adekoya P<sup>1</sup>, Magaji D<sup>2</sup>, Ejeh M<sup>1</sup>, Christopher A<sup>1</sup>

<sup>1</sup>Center for Clinical Care and Clinical Research, Uyo, Nigeria, <sup>2</sup>USAID Nigeria, Abuja, Nigeria

The first case of COVID-19 infection in Nigeria was announced on 27 February 2020. Within weeks, Nigeria experienced a rapid spread of the virus posing several threats to social, economic, and health activities. On April 1, Akwa Ibom State reported five initial cases of COVID-19 which informed a sudden state-imposed lockdown and restriction of movement.

The impact of this directive was urgently viewed as a significant threat to access to HIV care for children and adolescents living with HIV (C/ALHIV). This prompted emergent steps by CCCRN/ICHSSA 1 project to curb the impact of the lockdown on already achieved HIV outcomes for C/ALHIV. CCCRN/ICHSSA 1 engaged the State Government for an exemption to continue service delivery to all its beneficiaries. The project collaborated with the HIV treatment partners to implement differentiated care models including multi-month ART dispensing (MMD-3 or MMD-6) and home delivery of ARVs for clients who live an hour away from the facilities. The project caseworkers were assigned to facilities to generate a line-list and schedule ARV deliveries. In the community, C/ALHIV living in close proximity to the clients were mobilized for ART pickup.

Care workers intensified adherence support through guided visits, SMS, and phone calls. The project mobilized and provided food palliative to HIV-positive households for the duration of the lockdown. Program review conducted revealed that 9,091 C/ALHIV were retained in care and received ARV refills as at when due and accounted for in terms of adherence reports by caseworkers. Beneficiaries in CCCRN project communities were updated on the COVID-19 situation and demonstrated knowledge of adhering to preventive precautions at home and during visits to the clinics for ART pickups.

A total of 1,014 C/ALHIV households benefited from food palliative sourced and mobilized from community and government to meet food needs and retention in care. Without adaptive programming, containment measures for the COVID-19 pandemic could reverse milestones achieved in other health issues, particularly the HIV care cascade. This connotes a coordinated health response working with stakeholders at all levels (government, donors, implementing partners, communities) to effectively sustain current health outcomes while proactively dealing with novel health emergencies.

66

## Operation Triple Zero, a tool for epidemic control: The Akwa Ibom State experience

Akpan U<sup>1</sup>, Ukpong K<sup>1</sup>, Oyawola B<sup>1</sup>, **Nwanja E<sup>1</sup>**, Ike N<sup>1</sup>, Nyang L<sup>1</sup>, Nwaokoro P<sup>2</sup>, Olatunbosun K<sup>2</sup>

<sup>1</sup>Achieving Health Nigeria Initiative (AHNI, Nigeria), Uyo, Nigeria, <sup>2</sup>Family Health International (FHI360), Uyo, Nigeria

**Background:** Studies have shown that treatment outcome amongst adolescents and young people living with HIV (AYPLHIV) are sub-optimal. The Strengthening Integrate Delivery of HIV/AIDs Services (SIDHAS) project in Akwa Ibom State, funded by USAID implemented the Operation Triple Zero (OTZ) pilot focusing on empowering AYPLHIV to commit to the “triple zero outcomes”: zero missed appointments, zero missed drugs, and zero viral load in November 2019. This study seeks to assess the outcome of implementation of OTZ programs in the state.

**Materials and Methods:** We reviewed HIV quality of care indicators reported in the electronic medical records of 6714 AYPLHIV (M=1208; F=5506) on ART pre-OTZ intervention in November 2019 and 10,540 AYPLHIV (M=2191; F=8349) on ART after 7months of OTZ intervention in June 2020 across 31 comprehensive HIV treatment facilities in Akwa Ibom State. We compared ART refill appointment rate – defined by number of kept refill appointment over the expected refill appointments within the same period; viral load coverage; and viral suppression – defined as viral load <1000c/ml between these two periods. Data were analyzed with SPSS ver. 20. Descriptive statistics were used to measure indices.

**Results:** Our findings shows refill appointment rate moved from 77% (5170 vs 6714) pre-OTZ to 92% (9702 vs 10,540) after 7months of OTZ intervention with 11% (85% vs 96%), 13% (77% vs 90%) , and 16% (76% vs 92%) improvement across age groups 10-14, 15-19, and 20 – 24 respectively. Viral load coverage moved from 50% (1925 vs 3835) pre-OTZ to 73% (6021 vs 8224) after 7months of OTZ intervention with 5% (80% vs 85%), 26% (47% vs 73%), and 26% (46% vs 72%) improvement across age groups 10-14, 15-19, and 20 – 24 respectively. Viral load suppression moved from 50% (967 vs 1925) pre-OTZ to 80% (4788 vs 6021) after 7months of OTZ intervention with 42% (43% vs 85%), 32% (50% vs 82%), and 24% (54% vs 78%) improvement across age groups 10-14, 15-19, and 20 – 24 respectively.

**Conclusion:** Taking OTZ to scale holds promises for closing clinical management gaps and a means to achieve HIV epidemic control among AYPLHIV.

67

## In Rural Cameroon, Half of Adolescents are Experiencing Virological Failure With HIV Drug Resistance

**Togna Pabo W<sup>1,2,4</sup>**, Fokam J<sup>1,2,3</sup>, Takou D<sup>1</sup>, Njume D<sup>1,2,5</sup>, Ndip R<sup>4</sup>, Santoro M<sup>6</sup>, Mpouel M<sup>1,2</sup>, Chenwi C<sup>1,2</sup>, Tala V<sup>1,2</sup>, Beloumou G<sup>1</sup>, Ngoufack Semengue E<sup>1,6,7</sup>, Nka A<sup>1,6,7</sup>, Teto G<sup>1</sup>, Dambaya B<sup>1</sup>, Djupsa S<sup>1</sup>, Kamta C<sup>8</sup>, Bala L<sup>9</sup>, Lambo V<sup>10</sup>, Colizzi V<sup>1,6,7</sup>, Perno C<sup>1,6,11</sup>, Ndjolo A<sup>1,2</sup>

<sup>1</sup>Chantal Biya International Reference Centre For Research On HIV/AIDS Prevention And Management, Yaoundé, Cameroon, <sup>2</sup>Faculty of Medicine and Biomedical Sciences, Yaounde, Cameroon, <sup>3</sup>National HIV Drug Resistance Group, Ministry of Public Health, Yaounde, Cameroon, <sup>4</sup>Faculty of Science, University of Buea, Buea, Cameroon, <sup>5</sup>Faculty of Health Sciences, University of Buea, Buea, Cameroon, <sup>6</sup>University of Rome, Tor Vergata, Rome, Italy, <sup>7</sup>Evangelic University of Cameroon, Bandjoun, Cameroon, <sup>8</sup>Mfou District Hospital, Mfou, Cameroon, <sup>9</sup>Mbalmayo District Hospital, Mbalmayo, Cameroon, <sup>10</sup>Nkomo Integrated Health Centre, Nkomo, Cameroon, <sup>11</sup>University of Milan, Milan, Italy

**Background:** HIV/AIDS is the major cause of death among adolescents in sub-Saharan Africa, with fewer evidence-based decision-making specific to the rural context. Our objective was to evaluate the immuno-virological response, HIV drug resistance (HIVDR) and genetic profiling among adolescents with perinatal HIV infection (APHI) in rural Cameroon.

**Methods:** A cross-sectional study was conducted from December 2018 to May 2019 in the Mfou and Mbalmayo District hospitals. Self-reported adherence, CD4 cell count and plasma viral load (PVL) were measured. Immunological failure (IF) was defined <250 CD4 cells/mm<sup>3</sup>; virological success (VS) as PVL<40 copies/ml and virological failure (VF) as PVL≥1000 copies/ml. In case of VF, HIV-1 genotypic resistance tests (GRT) were performed and drug resistance mutations (DRMs) interpreted using Stanford HIVdb.v8.8; Subtyping was done using MEGAv10 for molecular phylogeny. Determinants of HIVDR were assessed and EWIs were monitored on-site. Data were analyzed using Epi info v7.2.2.16 with p<0.05 considered statistically significant.

**Results:** 74 APHI were enrolled following exhaustive sampling: sex ratio 1:1, median age [interquartile (IQR)] was 14 [12-17] years, median [IQR] duration on ART was 5 [3-9] years, 82% (61) were on first-line regimens and 64.86% (48) were adherent to ART. Following ART response, 26.87% (18/67) had IF (CD4<250 cells/mm<sup>3</sup>) and 52.7% (39/74) were on VF. Interestingly, 25.68% (19/74) had VS, indicating an undetectable viral replication. WHO clinical stage 3/4 was the only factor independently associated to IF (OR: 0.10, p=0.0009) and VF (OR: 0.099, p=0.043 respectively). Of those experiencing VF, 31 sequences were obtained from GRT and the prevalence of HIVDR was 90.32% (28/31). Major HIV-1 DRMs were M184V (74.19%), K103N (58.06%) and Y188L (19.35%). All clades belonged to HIV-1 group M (67.74% recombinants versus 32.26% pure subtypes), with CRF02\_AG (54.84%) being the most prevalent. EWIs of HIVDR were delayed drug pickup (60%/30.6%), pharmacy stockouts (75%/50%), and poor VL suppression (36.4%/38.5%) in Mfou and Mbalmayo respectively.

**Conclusion:** In rural settings of Cameroon, about half of APHI experience VF. This leads to HIVDR accumulation, favored by pharmacy stock outs and poor adherence. Thus, increasing access to VL and drug availability would limit treatment failure and help transitioning to adult care.

68

## Comparative analysis of multi-month dispensing and viral load outcomes in the advent of COVID-19 among Adolescents living with HIV (ALHIV) in Kenya

Achwoka D<sup>1</sup>, Odero L<sup>1</sup>, Okutoyi S<sup>1</sup>, Meassick E<sup>1</sup>

<sup>1</sup>Health Population Nutrition Office, US Agency for International Development Kenya and East Africa, Nairobi, Kenya

**Background:** Since March 2020, COVID-19 disease has led to disrupted HIV-treatment services. Differentiated service delivery models (DSD) such as three or more months ART dispensing (MMD 3+) among clients including adolescents living with HIV (ALHIV) has been accelerated. We characterized MMD 3+ and viral load (VL) outcomes among ALHIV pre and post advent of COVID-19 in Kenya.

**Methods:** Adolescent data were abstracted for periods October-2019 to March-2020 and April-2020 to August-2020 from USAID-funded implementing partners programs in Kenya. Descriptive analyses were conducted for categorical variables using frequencies and proportions; median and inter-quartile ranges were used for continuous variables. Logistic regression was used to determine effect of facility level on MMD 3+ uptake. SAS 9.4 was used for analyses.

**Results:** Overall, 20,878 ALHIV client records were analyzed from 998 facilities in 26 counties. A total of 11,019 (52.8%) females and 9,858 (47.2%) males were included; 51.4% and 48.6% between 10-14 and 15-19 years respectively. Majority 16,829 (80.6%) were on first-line, 4,031 (19.3%) on second-line and 17 (0.1%) on third-line ART regimen. Close to a half, 9,671 (46.3%), mostly male clients (58.5%) were on a dolutegravir-containing regimen. MMD 3+ for adolescents was offered by 449 (45.0%) facilities with 33.7% uptake prior to March 2020. In August 2020, 609 (61.0%) facilities offered adolescents MMD 3+ with 52.7% uptake. In March 2020, 17,391 (83.2%) of ALHIV had a VL with 13,647 (78.5%) being suppressed. 10,634 (77.9%) of ALHIV who were suppressed, maintained an undetectable VL reading by August 2020 while 2,669/2,999 (89.0%) of ALHIV with a previously higher VL experienced a drop in their VL. Higher level facilities had increased odds of MMD 3+ uptake compared to lower level facilities; (tier 4 vs tier 2) OR 3.11 [2.70-3.60], (tier 3 vs tier 2) OR 1.75 [1.66-1.86]; (p<0.001).

**Conclusion:** Extended ART refills for ALHIV on treatment increased post COVID-19. Viral load suppression rates pre and post March 2020 were comparable. In the post COVID-19 era, HIV programs may need to consider including MMD 3+ in their ALHIV treatment guidelines.

69

## Exploring the relationship between age and HIV viral load in an adolescent cohort over a 10-year period.

Van Dongen N<sup>1</sup>, Keal J<sup>1</sup>, Sorour G<sup>1</sup>, Levin L<sup>2</sup>, Dunlop J<sup>3,4</sup>, Technau K<sup>1</sup>

<sup>1</sup>Empilweni Services and Research Unit, Rahima Moosa Mother and Child Hospital, Department of Paediatrics and Child Health, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa, Johannesburg, South Africa, <sup>2</sup>Right to Care, Johannesburg, South Africa, <sup>3</sup>Anova Health Institute, Johannesburg, South Africa, <sup>4</sup>Division of Community Paediatrics, Department of Paediatrics and Child Health, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa

**BACKGROUND:** Despite global improvements to HIV services, adolescents have emerged as a vulnerable group. Viral suppression is a challenge in this sub-population. We evaluated the dynamics of viral suppression in a cohort of patients as they aged from 8 to 18 years; to determine if there was a correlation between increasing age and viral load (VL) in a clinic in Johannesburg.

**MATERIALS AND METHODS:** Prospective longitudinal data on viral load was collected for 102 children living with HIV. All patients in the cohort had been on treatment from at least age 6 and were enrolled and receiving regular care at the clinic between 8-18 years old. Annual VL results were compared between patients during pre-adolescence (8-<10), early adolescence (10-<14) and late adolescence (15-18). Viral suppression was defined as VL<50 HIV RNA copies/ml (cpm), low level viraemia as 50-1000cpm and high viral load as > 1000cpm.

**RESULTS:** The 102 children started ART at 4,9 years old (median age); 95 (93%) patients were initiated on stavudine, lamivudine and efavirenz as the median year of initiation was 2005 (IQR: 2004-2006). 89 -102 patients had an annual VL done from 8-18 years. In pre- and late adolescents, the median VL was less than 50, which increased to above 50 in early adolescence. The relationship between age and VL was statistically significant with higher viral loads in early adolescence and a slow improvement in late adolescence. In early and late adolescence, there was increased low level viraemia (51% and 46% respectively; p<0.001), compared to 23% in pre-adolescent patients. An increase in patients with high viral loads was noted in early adolescence (11%) worsening into late adolescence (16%) (p=0.036). Only 9% of pre-adolescent patients had a viral load greater than 1000.

**CONCLUSIONS:** Maintaining viral load suppression in adolescents is challenging. Increasing numbers of adolescents with high viral loads is of concern; with implications on the incidence of virological failure, ART drug resistance, immune deterioration, opportunistic infections, and ongoing transmission. Clinical and psychosocial interventions are needed to manage unsuppressed VL in adolescents. Comprehensive intervention during pre-adolescence may aid to prevent viraemia during early/late adolescence.

70

## The Provision of School-based Support for Adolescents and Youth Living with HIV in Boarding Schools in Homa Bay and Turkana, Kenya: The Red Carpet Program

Akuno J<sup>1</sup>, Simiyu R<sup>1</sup>, Okoth E<sup>1</sup>, Lagat Cherotich W<sup>1</sup>, Kose J<sup>2</sup>, Lenz C<sup>3</sup>, Rakhmanina N<sup>3</sup>

<sup>1</sup>Elizabeth Glaser Pediatric AIDS Foundation Kenya, , Kenya, <sup>2</sup>EGPAF Global, , Kenya, <sup>3</sup>EGPAF Global, , United States

**Introduction:** In schools, adolescents and youth living with HIV (AYLHIV) encounter factors that can enhance or hinder their treatment success. The Elizabeth Glaser Pediatric AIDS Foundation (EGPAF), funded by the ViiV Positive Action Fund, implemented a tailored package of activities at select boarding schools in Kenya to improve linkage to HIV treatment, adherence, and retention in care as part of the broader Red Carpet Program (RCP).

**Methods:** EGPAF scaled up this boarding school-based RCP initiative in coordination with the Ministry of Education and the Ministry of Health, targeting learners living with HIV (LLHIV) in 87 schools in Homa Bay and Turkana Counties from March 2016 to September 2019. Elements of RCP support in schools included the provision of care and treatment support; psychosocial support (PSS); the establishment of bi-directional linkages with healthcare facilities; capacity building for school staff, parents, and adolescent advocates on HIV support; HIV/SRH education; and stigma reduction. AYLHIV received treatment literacy education and counseling as well as disclosure and adherence support, including private storage space, monitored refills, and support focused on positive living and avoiding treatment disruptions.

**Results:** By the end of project year three, all 87 schools had established a bi-directional linkage with 66 health facility to support LLHIV and their HIV care clinics. A total of 561 school managers were sensitized, 476 adolescent advocates received capacity building training, and 546 LLHIV disclosed their status to a sensitized school representative and received treatment and adherence support. By September 2019, the overall suppression rate among AYLHIV in RCP facilities was 87% for younger adolescents (10-14 years) and 90% for older adolescents (15-19 years).

**Conclusion:** RCP highlights the effectiveness and feasibility of providing boarding school-based support for LLHIV. Increases in disclosure and use of adherence and PSS initiatives by LLHIV underlines the acceptability and need for this type of support. Approaches to tackle stigma in schools and provide holistic support to LLHIV remain priority areas and gaps for AYLHIV.



71

## Tenofovir concentrations in hair are associated with virological decrease in HIV-infected adolescents with second line virological treatment failure

Chawana T<sup>1</sup>, Nathoo K<sup>1</sup>, Ngara B<sup>1</sup>, Nhachi C<sup>1</sup>, Adolescent Treatment Failure (ATF) study team<sup>1</sup>

<sup>1</sup>Department of Clinical Pharmacology, College of Health Sciences, University of Zimbabwe, , Zimbabwe

**Background:** Nearly half of adolescents are virologically failing second line antiretroviral treatment (ART) due to poor adherence. Objective methods of measuring antiretroviral adherence are limited, especially in resource limited settings. We assessed the relationship between tenofovir concentrations in hair and self-reported adherence, virological outcome and a home-based adherence intervention in a cohort of HIV-infected adolescents with virological failure to second-line treatment in Harare, Zimbabwe.

**Methods:** HIV-infected adolescents on atazanavir/ritonavir-based second-line treatment for >6 months with viral load (VL)  $\geq 1000$  copies/mL were randomized to either modified directly administered antiretroviral therapy (mDAART) plus standard of care (intervention) or standard of care alone (control). Questionnaires were administered; viral load and hair samples were collected at baseline and after 90 days. Virological suppression was defined as  $\geq 1000$  copies/mL after follow-up. Chi-square (and Fisher's exact test where appropriate) and Student's t-tests were used to determine associations between tenofovir hair concentrations and virological outcomes at follow-up, as well as with study group and self-reported adherence. P-values (two-sided) were considered statistically significant if  $\leq 0.05$ .

**Results:** Fifty adolescents (13-18 years old) were enrolled, of whom 34 had tenofovir concentrations measured in hair at both baseline and after follow-up. Nineteen (56%) were randomised to mDAART. Higher tenofovir concentrations in hair were associated with mDAART (Regression co-efficient 0.5; SE 0.2; 95% CI 0.3 – 1.0;  $p=0.038$ ); age (Regression co-efficient 1.2; SE 0.1; 95% CI 1 – 1.4;  $p=0.05$ ) and viral load decrease from baseline (Regression co-efficient 0.8; SE 0.06; 95% CI 0.7 – 1.0;  $p=0.008$ ). Tenofovir concentrations in hair were not associated with self-reported adherence and virological suppression in multivariate logistic regression analysis.

**Conclusion:** Improved tenofovir hair concentrations predicted improved viral control in this cohort of HIV-infected adolescents with second line virological treatment failure. Improved tenofovir concentrations were observed in the intervention arm, most likely due to mDAART. Measuring hair antiretroviral concentrations provides a more objective Method to measure both adherence (behaviour) and drug exposure (pharmacokinetics) in one assay, and could be useful in managing populations that are at-risk of non-adherence to ART.

72

## “They will not like me” - The secret life of young adolescents living with HIV in northern Mozambique

Falcao J<sup>1</sup>, Zerbe A<sup>1</sup>, Kapogiannis B<sup>2</sup>, Simone B<sup>3</sup>, Pimentel De Gusmao E<sup>1</sup>, Brittain K<sup>4</sup>, Abrams E<sup>1,5</sup>

<sup>1</sup>ICAP at Columbia University, New York, United States, <sup>2</sup>Eunice Kennedy Shriver National Institute of Child Health and Human Development, Bethesda, United States, <sup>3</sup>Ministry of Health, Maputo, Mozambique, <sup>4</sup>Division of Epidemiology & Biostatistics, School of Public Health & Family Medicine, University of Cape Town, Cape Town, South Africa, <sup>5</sup>Vagelos College of Physicians & Surgeons, Columbia University, New York, United States

**Background:** In Mozambique, adolescent mortality is decreasing but HIV remains one of the leading causes of death for both female and male adolescents. Effective interventions aimed at younger adolescents living with HIV (ALHIV) are critical to establish positive health behaviours to reduce morbidity and mortality as they age into young adulthood.

**Materials and Methods:** A cross-sectional survey among 61 ALHIV aged 12–14yrs was conducted at two health facilities in Nampula, Mozambique, from November 2019–March 2020. Survey domains included medical history, sexual and reproductive health (SRH), and antiretroviral therapy (ART) adherence. In-depth interviews (IDIs) were completed with a purposively selected subset of 14 ALHIV who completed the survey and were aware of their HIV status. Quantitative data were analysed using descriptive statistics. Qualitative data were transcribed and analysed using thematic content analysis using NVivo 12 software.

**Results:** Median age of ALHIV was 13yrs [inter-quartile range (IQR) 12, 14], 31(50%) female, 41(67%) lived with ≥1 parent and 100% were in school; 6(10%) were in a relationship and 2(3%) had initiated sexual activity. Only 31(51%) were aware of their HIV status. Of these, 17(55%) took their ART with the support of a caretaker; 11(35%) reported missing ≥1 ART dose in the last 30 days; and only 2 (6%) had disclosed their status to any friends. Fourteen IDIs were completed (6 female). Five main themes emerged: a) learning one’s HIV positive status marks the beginning of a secret life for fear of losing their social network; b) caregivers are often the only resource for adherence support; c) expectation that taking ART will become easier with age; d) potential for ALHIV peer support interventions to overcome isolation, increase HIV literacy and support adherence, and e) unmet needs for SRH education and services.

**Conclusions:** Adolescent-friendly services including HIV peer support and SRH services will be welcomed by ALHIV and deserve prioritization in ART programs in Mozambique. HIV related stigma and associated secrecy continues to impede access to HIV support programmes during early adolescence.

73

## Feasibility of peer led active TB case finding, mobilisation for IPT and adherence support among Adolescents and Young People living with HIV in Zimbabwe

Sellberg A<sup>1</sup>, Willis N<sup>1</sup>, Sandy C<sup>2</sup>, Kranzer K<sup>3</sup>

<sup>1</sup>Africaid, Harare, Zimbabwe, <sup>2</sup>Ministry of Health and Child Care, AIDS and TB unit, Harare, Zimbabwe, <sup>3</sup>London School of Hygiene and Tropical Medicine, Harare, Zimbabwe

**Background:** Zvandiri through its community adolescent treatment supporters (CATS) model is a peer to peer support programme integrated within Ministry of Health and Child Care (MoHCC), providing adherence support to adolescents and young people living with HIV (AYPLHIV) in Zimbabwe. APLHIV experience a significant burden of tuberculosis (TB) in Zimbabwe. This study aims to evaluate the role of the CATS in supporting early TB diagnosis and adherence to TB treatment, in addition to uptake of and adherence to isoniazid preventive therapy (IPT).

**Methods:** AYPLHIV 10-24 years living in three communities in Zimbabwe and registered with the CATS programme were eligible for this study. Nine CATS were trained to conduct active TB case finding in the community using a TB symptom screening tool. AYPLHIV screening positive for TB symptoms were referred for microbiological testing to primary health clinics. Those without symptoms were screened for IPT eligibility according the MoHCC guidelines.

**Outcome:** From July to September 2019, a total of 264 AYPLHIV were screened, of which 32 (12%) had symptoms suggestive of TB and were referred to the health facility, and 3 (1%) were diagnosed with TB and linked to treatment and care. Of those that did not report any symptoms, 41 (16%) were eligible for IPT and were referred to the health facility, and 32 (78%) of these accessed the health facility and were started on IPT.

**Discussion:** Integrating active case finding and IPT into existing community models is feasible and resulted in a high yield of TB diagnosis. Future research should focus on the role of repeated screening and the frequency as well as the role of CATS in supporting adherence to IPT and TB treatment.

74

## Epidemiology of Non-communicable Diseases and Risk factors in South African Adolescents and Youth Living with HIV in an urban setting.

Kamkuemah M<sup>1</sup>, Gausi B<sup>1</sup>, Oni T<sup>1,2</sup>

<sup>1</sup>Research Initiative for Cities Health and Equity (RICHE), Division of Public Health Medicine, School of Public Health and Family Medicine, University of Cape Town, Cape Town 7925, South Africa, <sup>2</sup>Medical Research Council Epidemiology Unit, University of Cambridge, Cambridge, United Kingdom

**Background:** Adolescents and youth living with HIV (AYLHIV) face an elevated Non-communicable Disease (NCD) risk resulting from HIV, psychosocial challenges and the complications of antiretroviral therapy (ART).

**Methods:** We conducted a cross-sectional study in six primary care facilities to investigate the prevalence of common NCDs and risk factors among AYLHIV in Cape Town, South Africa from March- December 2019.

**Results:** Three out of four respondents were female. More than a quarter were not in education, employment or training (NEET) and 44% were multidimensionally poor. More females were overweight or obese compared to males (43% versus 14%), and the prevalence of hypertension (defined as average blood pressure  $\geq 140/90$  mmHg) was higher in males compared to females (14% and 3% respectively). No participants had abnormal blood glucose measurements. A third engaged in insufficient physical activity (21% of males and 34% of females) and half reported 3 or more hours of sedentary behaviour per day. Almost half the respondents were exposed to secondhand tobacco smoke and 48% of males were current smokers compared to 25% of females. Alcohol and harmful use of alcohol was highly prevalent with 41% reporting consuming alcohol in the past month. Half of the underage group (aged < 18 years) were current drinkers and 60% of them engaged in binge drinking. AYLHIV further self-reported high levels of household food insecurity (70%), low fruit and vegetable consumption, high fast-food and sugar-sweetened beverage intake, low nutritional knowledge and almost half did not eat breakfast daily.

**Conclusion:** Our results show an existent burden of hypertension and obesity in urban AYLHIV. Beyond the NCD risk attributable to HIV and ART, these multiple risk factors coupled with early initiation of high-risk behaviours like smoking and harmful use of alcohol, further increase NCD risk. Our findings highlight the importance of integrated prevention with NCD risk screening as part of HIV care for AYLHIV and the need for early intervention on social, environmental and economic determinants of NCDs targeting adolescents and youth in low-middle-income settings.

75

## Prevalence of HIV among adolescent girls involved in Sex Work in Burkina Faso

**Traore** I<sup>1,2</sup>, Savadogo L<sup>2,3</sup>, Kania <sup>1</sup>, Bationo F<sup>4</sup>, Somda S<sup>1,5</sup>, Tassebedo S<sup>1</sup>, Bado H<sup>6</sup>, Zerbo S<sup>6</sup>, Ki/Toe C<sup>7</sup>, Meda N<sup>1</sup>, Guiard-Schmid J<sup>8</sup>

<sup>1</sup>Centre Muraz Research Institute, Bobo-dioulasso, Burkina Faso, <sup>2</sup>Institut Supérieur des Sciences de la Santé, Université Nazi Boni, Bobo-Dioulasso, Burkina Faso, <sup>3</sup>Département de Santé Publique, Centre Hospitalier Universitaire Souro Sanou, Bobo-Dioulasso, , <sup>4</sup>Unité Centrale de Planification et de suivi évaluation, Conseil National de Lutte Contre le Sida et les IST, Ouagadougou, Burkina Faso, <sup>5</sup>Unité de Formation et de Recherche Sciences et Techniques, Université Nazi Boni, Bobo-Dioulasso, Burkina Faso, <sup>6</sup>Ecole supérieure d'informatique, Université Nazi Boni, Bobo-Dioulasso, , <sup>7</sup>Cellule du Projet Fonds Mondial sida Secteur Public, Conseil National de lutte contre le Sida et les IST, Ouagadougou, Burkina Faso, <sup>8</sup>Unité de Formation et de Recherche Sciences de la Santé, Université Joseph Ki-Zerbo, Bobo-Dioulasso, Burkina Faso, <sup>9</sup>ICI-Santé,, Ouagadougou, Burkina Faso

**Introduction:** Adolescent girls involved in sex work may face increased vulnerability to HIV. However, few studies had directly assess that vulnerability. To bridge this knowledge gap, adolescent girls aged less than 18 years involved in sex work have been included in the integrated biological and behavioral surveillance survey conducted in 2017 in Burkina Faso. The objective of the study was to determine the prevalence of HIV among adolescent girls involved in sex work.

**Methods:** A secondary analysis of the Burkina Faso 2017 Integrated BioBehavioral Survey among key populations database was done.

**Results:** A total of 196 adolescent girls aged less than 18 years involved in sex work were included in the study, with the majority of them (85.91%) were aged between 15 and 18 years. More than two-thirds (72.45%) of whom were "professional Sex Workers". The prevalence of HIV was 3.06% 95% CI [1.25-6.26] in this population. In multivariate regression, affiliation to a Female Sex workers NGO (aOR = 10.44 95% CI [1.49-73.17]) and good knowledge of the modes of HIV transmission were associated with HIV prevalence (aOR = 0.13 95% CI [0.02-0.80]).

**Conclusions:** Our results confirm a high vulnerability of adolescent girls involved in sex work to HIV. There is a need to provide them with free access to comprehensive sexual education and HIV prevention services. This services delivery should start before their sexual debut.

76

## Experiences of caregivers of young adolescents living with HIV in Mozambique – a mixed **Methods** approach

**Falcao J<sup>1</sup>**, Zerbe A<sup>1</sup>, Kapogiannis B<sup>2</sup>, Couto A<sup>3</sup>, Vitale M<sup>1</sup>, Brittain K<sup>4</sup>, Abrams E<sup>1,5</sup>

<sup>1</sup>ICAP at Columbia University, New York, United States, <sup>2</sup>Eunice Kennedy Shriver National Institute of Child Health and Human Development, Bethesda, United States, <sup>3</sup>Ministry of Health, Maputo, Mozambique, <sup>4</sup>Division of Epidemiology & Biostatistics, School of Public Health & Family Medicine, University of Cape Town, Cape Town, South Africa, <sup>5</sup>Vagelos College of Physicians & Surgeons, Columbia University, New York, United States

**Background:** There is a need for interventions to improve 90-90-90 targets among adolescents living with HIV (ALHIV) in sub-Saharan Africa. Understanding the central role that caregivers play in supporting adherence to antiretroviral therapy (ART), we sought to characterize a group of caregivers and explore their perceptions and experiences related to caring for young ALHIV in northern Mozambique.

**Materials and Methods:** We conducted a cross-sectional survey among 61 caregivers of young ALHIV (12-14yrs), from November 2019-March 2020 in two health facilities in Nampula, Mozambique. We invited a purposively selected subset of 22 surveyed caregivers, both HIV positive and HIV negative who had and had not disclosed their child's HIV status to their ALHIV, to participate in in-depth interviews (IDI). The survey and the IDI explored questions related to HIV-status disclosure, ART adherence and challenges associated with caring for an ALHIV. Quantitative data were analyzed using descriptive statistics. Qualitative data was transcribed and analyzed using thematic content analysis using NVivo 12 software.

**Results:** A total of 61 caregivers completed surveys, 50(82%) female, median age 36yrs [IQR 31, 41]; 58(95%) lived with the adolescent. A total of 35(57%) had completed primary education or higher and 25(41%) were employed. Of 60(98%) who had been tested for HIV, 36(60%) reported testing HIV-positive and 14(39%) had disclosed their HIV-positive status to their child. Almost half, 28(46%) reported sharing responsibility for ART administration with the adolescent, while 15(25%) said they were solely responsible for this; 13(23%) reported that the adolescent had missed at least one dose in the last 30 days. Twenty-two caregivers (19 female) completed an IDI.

Emerging themes were

- a) negative community perceptions/stigma around HIV;
- b) difficulties in decision making related to when to disclose HIV status to ALHIV;
- c) secrecy around HIV results in caregivers being the sole supporters of adolescent adherence; and
- d) viewing their child as being too young to discuss issues related to sexual and reproductive health.

**Conclusion:** Caregivers play a determinant role in sustaining ALHIV treatment adherence in northern Mozambique. In this context, interventions that target caregiver/adolescent dyad empowerment and support might facilitate communication and improve ALHIV health outcomes.

Abstract 77 is withdrawn

78

## The changing face of paediatric HIV: A review of the evolving clinical characteristics of a paediatric and adolescent patients at a clinic in Johannesburg, South Africa.

Keal J<sup>1</sup>, van Dongen N<sup>1</sup>, Sorour G<sup>1</sup>, Levin L<sup>2</sup>, Dunlop J<sup>3,4</sup>, Technau K<sup>1</sup>

<sup>1</sup>Empilweni Services and Research Unit, Rahima Moosa Mother and Child Hospital, Department of Paediatrics and Child Health, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa, <sup>2</sup>Right to Care, Johannesburg, South Africa, <sup>3</sup>Anova Health Institute, Johannesburg, South Africa, <sup>4</sup>Division of Community Paediatrics, Department of Paediatrics and Child Health, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa

**Background:** HIV-infected adolescents, aged between 10 and 19 years, represent a vulnerable and growing population. With a decline in perinatal HIV transmission, a shift in paediatric HIV services towards caring for adolescents has been observed. There is growing concern about the incidence of non-communicable diseases, particularly those related to increased BMI, and the effects of long-term ART exposure on this sub-population. This review was conducted to understand the relationship between age, duration of ART exposure and adolescent patient clinical characteristics over the past 15 years.

**Materials and Methods:** Prospective longitudinal data were analysed from the clinical visit database of a Hospital-based paediatric and adolescent HIV clinic in Johannesburg, South Africa. We assessed the cohort by taking cross-sectional samples from four different years (2005, 2010, 2015 and 2020). For each year, the age, nadir CD4 count, duration on ART and BMI were compared. Data from the first clinical visit of the year was used. All patients enrolled at the clinic at the times of sampling were included.

**Results:** In 2005, adolescents made up 12% of the cohort (N=96) compared with 71% in 2020 (N=799;  $P<0.0001$ ). The nadir CD4 count improved, with 35% having a CD4<200 cells/uL in 2005 compared with 25% in 2020 ( $p<0.0001$ ). In 2005 62% of patients had been on treatment for a duration of 1 year or less (N=308) compared with 2020 where 50% of the cohort had been on treatment for >10 years (N=754) ( $p<0.0001$ ). In 2005, less than 1% (N=1) of the sample population had a BMI >25 which increased to 4% (N=56) in 2020 ( $p<0.0001$ ) with 1% (N=19) recording a BMI >30.

**Conclusions:** These data demonstrate the ageing of the paediatric HIV programme, to care for increasing numbers of HIV-infected adolescents. With improved access to ART, a more immune-competent cohort at ART initiation is seen. In line with global trends, the number of adolescents who classify as overweight is rising. Even though this cohort's rate of adolescent obesity is below the national rate, the prevention and treatment of non-communicable diseases in adolescents on ART long-term is an important focus area.

## Building resilience of adolescent girls through economic strengthening activities, a focus on savings and lending schemes

*Pfupajena M<sup>1</sup>, Mudzengerere F<sup>1</sup>, Dhakwa D<sup>1</sup>, Mundingi R<sup>1</sup>, Mushayi I<sup>1</sup>, Ndawana K<sup>1</sup>, Tafuma T<sup>1</sup>*

<sup>1</sup>FHI360, Harare, Zimbabwe

**Background:** Adolescent girls and young women (AGYW) in sub-Saharan Africa are disproportionately affected by HIV, with up to three times as many young women aged 15-24 living with HIV as compared to their male counterparts. Literature has shown a positive correlation between economic strengthening (ES) interventions and HIV sexual risk among AGYW. Thus, financial empowerment of AGYW has proved to be a mechanism for sexual HIV risk reduction, specifically the reduction of transactional sex. In line with this, FHI360 Zimbabwe is implementing a five-year USAID-funded Determined, Resilient, Empowered, AIDS-free, Mentored, and Safe (DREAMS) program, whose goal is to reduce new HIV infections amongst vulnerable adolescent girls and young women (AGYW) aged 15-24. Through the DREAMS programmes, ES interventions are designed to equip adolescent girls with life, technical and financial skills which play a pivotal role in building resilience of vulnerable AGYW. This study assesses the impact of DREAMS ES activities in building resilience among AGYW.

**Methods:** This was a cohort study involving analysis of routine programme data of AGYW who were offered ES activities between October 2018 and September 2019 from three DREAMS districts namely Mazowe, Gweru and Bulawayo. Data was analysed using Microsoft excel.

**Results:** During the period under review, a total of 127 internal savings and lending schemes (ISALs) groups were formed in the three districts, with a total membership of 885. 92%(812/885) were retained in the savings groups with an attendance rate of 94% for the monthly meetings. Retention in the groups is due to the bonding and linking social capital that comes with being member of the group and thus contributing to building resilience of the members. All the groups had a total savings value of \$22,941.48, with value of loans of \$19,564.61 and cash at hand of \$7,504.08.

**Conclusion:** The savings, retention rates and attendance rates by AGYW in ISAL groups is so encouraging. These community-based interventions empower girls and young so that they are self-reliant which in the end it will improve their resilience. The DREAMS programme will continue to empower AGYW through the community based ES activities.



80

## Status of Adolescent and Youth Services in Blantyre, Malawi: A Baseline Assessment of Adolescent and Youth Health-Friendly Services (AYFHS) in Four Selected Sites for the Red Carpet Program Implementation

Musukwa T<sup>1</sup>, Sunguti J<sup>1</sup>, Msuku L<sup>1</sup>, Lenz C<sup>2</sup>, Kose J<sup>3</sup>

<sup>1</sup>Elizabeth Glaser Pediatric AIDS Foundation Malawi, Blantyre, Malawi, <sup>2</sup>EGPAF Global, Washington D.C., United States, <sup>3</sup>EGPAF Global, Kenya

**Introduction:** In 2015, the WHO and UNAIDS translated previously defined characteristics and principles of adolescent-friendly health services (AFHS) into eight global standards, delineating the level of quality in services for adolescents, including adolescents and youth living with HIV (AYLHIV). The Elizabeth Glaser Pediatric AIDS Foundation's (EGPAF) Red Carpet Program (RCP) in Malawi utilized these standards to inform a baseline assessment to identify areas for programmatic focus during initial project planning.

**Methods:** EGPAF-Malawi used the global standards to develop a baseline data collection module for completion at four targetted facilities providing AYHLIV services in Blantyre. The questionnaire assessed seven sections: health literacy, community support, appropriate package of services, provider competencies, equity/non-discrimination, data quality and improvement, and adolescent participation—each with multiple sub-questions. Providers at each facility completed the tool for their respective sites in May 2020.

**Results:** The four RCP pilot facilities completed the assessment in full, despite delays concerning COVID-19-related site closures. The results revealed trends in availability and lack of certain elements of quality AYFHS provision. Across all four sites, providers and site staff received training in AYFHS (provider competency). Most sites (3/4) employed AY capacity-building activities in healthcare provision (adolescent participation) and reported their providers know the vulnerable AY groups in their communities (equity/nondiscrimination). Indicators concerning the availability of resources (standard referral processes; supervision systems for provider performance; inclusion and participation of adolescents in planning, implementation, and evaluation of services) were less consistently available. The availability of AYFHS elements varied across sites, with one reporting 4/40 and another reporting 24/40. The areas that did not meet minimum standards were discussed with facilities and flagged for remediation.

**Conclusions:** The baseline assessment revealed strengths and weaknesses in current AY programming at the four pilot RCP sites. The assessment supported a standardized evaluation of quality AYFHS provided at facilities, informed a capacity-building focus for providers, and refined the RCP package in Malawi. The assessment will be repeated after 12 months. The adaptation and contextualization of the WHO/UNAIDS standards into a practical resource to inform areas of focus for quality AYLHIV service delivery was feasible and valuable.

81

## Viral load uptake and suppression among pregnant and breastfeeding adolescent girls and young women (AGYW)

Ronan A<sup>1</sup>, Wallace M<sup>1</sup>, **Makhupula L<sup>1</sup>**, Hofmeyr C<sup>1</sup>, Mbule M<sup>1</sup>, Schmitz K<sup>1</sup>

<sup>1</sup>mothers2mothers, Cape Town, South Africa

**Background:** Maternal HIV viral load is one of the most important predictors of ART effectiveness and mother-to-child HIV transmission (MTCT). Late antenatal booking and ART initiation are associated with poor virologic control.

**Methods:** We conducted a retrospective cohort analysis of adolescent girls and young women (AGYW) living with HIV, disaggregated by age using routine facility data from a cohort supported by the mothers2mothers (m2m) peer-based model. All antenatal and postnatal clients from Lesotho, South Africa and Uganda, enrolled between 1 Jan and 30 Jun 2017 and with follow up for 30 to 36 months until 31 December 2019 were included in the analysis.

**Results:** A total of 3522 AGYW were included in the analysis; 137(4%) were 15 to 19 years, 716(20%) were 20-24 years, and 2667(76%) were 25 years and older. Findings show decreased likelihood of viral load (VL) testing with decreasing age, with 65.7% of adolescents 15-19 years never testing, compared to 60% of women 20-24 years and 52.3% of those 25 years and older. In addition, of those tested, adolescents were least likely to be virally suppressed with 72.3% of those 15 to 19 years virally suppressed compared to 80.7% of women 20-24 years and 83.6% of women 25 years and older.

**Discussion:** Our results showed that viral load testing uptake and viral suppression was lower among AGYW compared to adults and lower than the UNAIDS target of 73%. These findings corroborate studies that have shown that AGYW (15-19) are less likely than older women to have tested for HIV and not initiated ART until pregnancy. This late ART initiation is likely to lead to poor viral suppression which may be sustained through to the postpartum period, further increasing the risk of MTCT. Our results highlight the need for interventions that promote timely uptake of viral load testing and enhanced client centred adherence counselling for AGYW. Upstream interventions should include information and education on sexual and reproductive health (SRH) services to engage with preventative services earlier than pregnancy.

## Challenges adolescents and young people living with HIV face in adhering to ART: The Nigerian Experience

Onwe E<sup>1</sup>, Asieme E<sup>1</sup>

<sup>1</sup>Foundation for Better Health and Human Rights (FBHR), Abakaliki, Nigeria

**Issues:** Adolescents and young people living with HIV (AYPLHIV) in Nigeria face numerous challenges in adhering to their anti-retroviral drugs. These challenges include: stigma; lack of treatment literacy; lack of physical and social support systems; and lack of friendly healthcare services dedicated to AYPLHIV. The Foundation for Better Health and Human Rights (FBHR), a local NGO in Nigeria, commissioned a study to evaluate the effects these challenges have on the wellbeing of AYPLHIV who attended the AI NEST support group meetings in Ebonyi state, Nigeria.

**Descriptions:** The study was conducted between October and November 2019 in Alex Ekwueme Federal Teaching Hospital Abakaliki (AE-FUTHA), the largest referral hospital in Ebonyi state. Six (6) focused group discussions was conducted with a total of fifty-eight (58) AYPLHIV between the ages of 14-24 in attendance, who were recruited from the AI NEST support group, and six (6) from participants who attended the hospital at the time of study, totaling sixty-four (64) participants.

**Lessons learned:** The focus group discussions revealed that many AYPLHIV experience stigmas as a result of the misconception and incomprehension their friends and families have about their condition, this made their greatest challenge disclosing their status to friends and/or family. They had to devise strategies to avoid stigma. A handful admitted they had to deal with changing the packaging of the medication to avoid easy detection, yet they take the medication as recommended; some had to lie when they are seen by their peers taking their drugs, while others skip the medication altogether to avoid detection. Some have difficulty with adhering to daily drug schedules, others emphasized on the need for psychosocial support as sometimes they cannot handle depression and anxiety that comes with living with HIV.

**Next steps:** The study highlighted AYPLHIV drug adherence challenges. Some recommendations are to identify context specific interventions like integrating ART services into existing youth friendly corners, increase psychosocial counselling and support for AYPLHIV. At policy level, the needs of adolescents should be included in the review and development of Nigeria's health strategic plans in order to enhance the country's chances of ending HIV epidemic.

83

## Modalities for achieving UNAIDS 95-95-95 targets among children, adolescents and young adults living with HIV in Cross River State, Nigeria using the differentiated model of care.

**Ndep A<sup>1</sup>**, Eyam F, Imohi P, Obase K, Achara F, Agada P, Odey K, Bateganya M, Egbe M

<sup>1</sup>Enareh Public Health Consultancy, Calabar, Nigeria

**Introduction:** Nigeria contributes a quarter of all children born with HIV in the world. Consequently, the number of children and youths living with HIV is consistently rising. The aim of this study was to assess the role of differentiated model of care (DMOC) in achieving optimal care and viral load monitoring among HIV positive adolescents and young adults in the study area.

**Methods:** Differentiated Model of Care (DMOC) is offered to clients to improve the quality of care they received and to optimize services uptake. The relationship between DMOC and viral load suppression is tested.

**Results:** Of the 1,483 adolescents and young adults living with HIV, aged 10-24 years in care across 49 healthcare facilities, 322(21.7%) are males and 1,161(78.3%) are females. Pre-teens (10-12-year olds) are 121(8%), teenagers (13-19-year olds) are 498(34%) while young adults (20-24-year olds) are 864(58%). Only 794 (54%) have viral load results, of these, 95(12%) have undetectable viral load levels and 540(68%) are virally suppressed. Those aged 16-24 years are the least in viral load services utilization. Clients receiving services through the DMOC have a better viral suppression rate (9% undetectable, 47% suppression) compared to non-DMOC clients (2% undetectable and 13% suppression rate). Clients utilizing the DMOC option of services are less likely to default on viral load services uptake (35% default rate) than non-DMOC clients (81%) default rate. Pearson correlation shows that there is a significant positive relationship between clients receiving DMOC services ( $M=160.32$ ,  $SD=313.9$ ) and viral suppression rate ( $M=1.11$ ,  $SD=1.12$ ),  $r=0.218$   $p<0.01$ ,  $n=1483$ .

**Conclusion:** DMOC shows promise in improving quality of care to HIV positive clients. This has effect on their health outcomes in terms of viral suppression and their overall health status.

84

## Risk Assessment Tool: A New Way Of Enhancing ART Adherence Among Adolescents Living With HIV

Essink L<sup>1</sup>, Madukani H<sup>2</sup>

<sup>1</sup>Aidsfonds, Amsterdam, Netherlands, <sup>2</sup>Coalition of Women Living with HIV and AIDS, Lilongwe, Malawi

**Background:** Coalition of Women Living with HIV and AIDS (COWLHA) with Aidsfonds conducted a research titled “Determinants of ART among Young People Living with HIV”. The end result of the research was a project developed with a risk assessment tool to determine individual factors among adolescents on ART that undermine treatment adherence. The objective of the project is ART adherence among adolescents living with HIV as the research conducted was against a background that ART non-adherence is higher among adolescents (young people).

**Description:** The project is being implemented in Chikwawa and Mangochi districts of Malawi targeting adolescents living with HIV. There are 36 youth support groups established with 968 adolescents benefiting from the project. The project is implemented by community volunteers who administer the risk assessment tool using individual and group sessions. Once a risk is identified, an adolescent is linked to a relevant institution of support, for instance teen club.

**Results and Lessons Learnt:** Through the project, ART adherence among adolescents has been increased by 40% in the area where the project is being implemented. Also, more young people have disclosed their status and joined youth support groups as HIV stigma and discrimination has reduced due to community sensitization meetings conducted by community volunteers in collaboration with traditional leaders. The risk assessment tool has linked almost 436 youth with institutions of support through a referral network and case management. Above, the tool is contributing to the well-being of youth living with HIV due to increased health seeking behavior and psychosocial support received through the support groups, individual counselling and teen clubs. Some of the lessons learnt are adolescents living with HIV require more support than adults in order to adhere to treatment because of factors such as lack of youth friendly health services, lack of financial independence to get transport to health facilities and buy nutritional supplements and above all HIV stigma and discrimination as experienced in institutions of learning.

**Conclusion:** From the lessons learnt, COWLHA and Aidsfonds will scale up the project to other districts within Malawi with the aim of increasing treatment adherence among adolescents.

85

## Predictors of worsening viral load within the first-two years of ART initiation for children and adolescents

Mucho M<sup>1</sup>, Pascal N<sup>1</sup>, Desembuin F<sup>1</sup>, Bernard A<sup>1</sup>, Ernest B<sup>1</sup>

<sup>1</sup>Cameroon Baptist Convention Health Services, Buea,, Cameroon

**Introduction:** As countries work towards UNAIDS 95:95:95 epidemic targets, early identification of patients with inadequate response to antiretroviral therapy (ART) is critical for achieving optimal HIV treatment outcomes. As a result, evaluating clinical predictions of virologic failure in pediatrics and adolescents preceding a successful suppression is of paramount importance to attain epidemic control.

**Background and Methods:** This was a cross-sectional study involving 24 health facilities in the South West Region of Cameroon, evaluating viral load (VL) suppression at 6 and 12 months after ART initiation of children (0-19 years) newly enrolled on ART between February 2018 and July 2020. Suppressed VL was defined as <1000 copies/ml of blood plasma and unsuppressed VL as ≥1000 copies/ml. Secondary data was used from DAMA software and analyzed with Microsoft Excel 2019

**Results:** Of a total of 266 children (119 males and 147 females) newly placed on ART, 194 were within 0-14 and 72 within 15-19 age groups. Of these, 52 (34 aged 0-14 and 18 aged 15-19) had at least a 2nd VL test done twelve months after ART initiation, where 22 (45%) were unsuppressed being 18 (53%) for 0-14 and 4 (22%) for 15-19 age groups. Of the 22 unsuppressed children, 12 (23.1%) had previously been suppressed, while the rest 10 had much higher values for their second and third VL results. It was observed that VL sample collection periodicity for all the children did not perfectly align with the national algorithm as some had their VL samples either collected earlier (3 months) or later than expected (over a year). The documented weights of the children did not match their expected ARV doses. Finally, only 15 (38%) children out of 40, age 5-19 who had subsequent follow-up VL had received appropriate age-customized counseling on HIV disclosure.

**Conclusion:** From the observation, two key predictors of high unsuppressed VL among children 0-19 were: inappropriate ARV prescription among children aged 0-19, and sub-optimal psychosocial support provided by healthcare providers to children's parents/guardians on adherence counseling and timely disclosure of HIV status.

86

## Examining the Impact of COVID-19 on Adolescents Living with HIV in New York City

Posada R<sup>1,2</sup>, Chory A<sup>1,3</sup>, Martin R<sup>1,3</sup>, Childs J<sup>2</sup>, Waldman R<sup>3</sup>, Chiacchia S<sup>3</sup>, Cohen A<sup>3</sup>, Callen G<sup>4</sup>, Vreeman R<sup>1,3</sup>

<sup>1</sup>Arnhold Institute For Global Health at Mount Sinai, New York, United States, <sup>2</sup>Mount Sinai Health System, New York, US, <sup>3</sup>Icahn School of Medicine at Mount Sinai, New York, US, <sup>4</sup>Indiana School of Medicine, Indianapolis, US

**Background:** Adolescents living with HIV (ALWH) are particularly susceptible to disruptions in care that lead to poor HIV-related outcomes. The COVID-19 pandemic poses a threat to ALWH through related illnesses, impact to their ability to access HIV care and support services and disrupting their social and financial livelihoods. ALWH face barriers in maintaining adherence, including forgetting, limited access to medication, and changes in daily routine, which could be exacerbated during a pandemic. Our objective is to describe the self-reported impact of the pandemic on the health and socioeconomic well-being of ALWH living in New York City (NYC).

**Methods:** Participants were ALWH, 13-24 years, enrolled in HIV care at a Mount Sinai clinic in NYC and active in care in the past 18 months. Telephone surveys are conducted longitudinally at baseline, 3, and 6 months; query knowledge of COVID-19 and assess its impact on socioeconomic status, access to health care services, and health-related behaviors. We report the initial baseline assessments completed with a sub-set of ALWH.

**Results:** At enrollment, 7 participants (71% perinatally infected, 57% male, mean age 21 years, 86% non-white), demonstrated significant COVID-19 literacy and financial and mental health challenges. Most (57%) participants identified Instagram as their main source of COVID-19 information, rather than the HIV clinic. Participants identified fever (86%) and cough (71%) as COVID-19 symptoms; all participants articulated that anyone could become infected and that a vaccine was not currently available. Participants (86%) reported no concerns about their health, and identified protective behaviors like hand washing, avoiding public places and public transportation and covering their faces in public. All participants reported leaving their homes for food, and 57% continued to report to in-person work sites. Participants (43%) reported loss of income and atypical food insecurity, increased difficulty accessing care (43%) and skipping medications due to concerns about running out of ARTs (14%). The pandemic also influenced mental health, 29% reporting new or exacerbation of pre-existing symptoms of depression.

**Conclusion:** Participants demonstrated significant COVID-19 literacy and reported an increase in mental health and financial challenges. These early findings highlight important opportunities to shape service delivery to vulnerable ALWH.

87

# Transition experience from adolescent to adult HIV care among adolescents and young adults

Itindi J<sup>1</sup>, Onyango A<sup>2</sup>, Mugo C<sup>3</sup>, Njuguna I<sup>3</sup>, Beima-Sophie K<sup>4</sup>, Mburu C<sup>2</sup>, Richardson B<sup>4,6</sup>, Oyiengo L<sup>9</sup>, John-Stewart G<sup>4,5,7,8</sup>, Wamalwa D<sup>2</sup>

<sup>1</sup>Kenya Medical Research Institute, Nairobi, Kenya, <sup>2</sup>Departments of Pediatrics and Child Health, University of Nairobi, Nairobi, Kenya, <sup>3</sup>Kenyatta National Hospital, Research and Programs, Nairobi, Kenya, <sup>4</sup>Departments of Global Health, , <sup>5</sup>Epidemiology, , <sup>6</sup>Biostatistics, , <sup>7</sup>Health Services, , <sup>8</sup>Medicine and Pediatrics University of Washington, Seattle, USA, <sup>9</sup>National AIDS and STI Control Program, Ministry of Health, Nairobi, Kenya

**Introduction:** Transitioning adolescent and young adults living with HIV (ALHIV) to adult care has been associated with reduced adherence to antiretroviral treatment (ART) and loss to follow-up. We evaluated the perspectives of ALHIV on their transition experience.

**Methods:** As part of an ongoing cluster randomized study on transition among ALHIV (aged 10-24 years) attending 20 clinics in Kenya, a convenience sample (~20 ALHIV/clinic) completed an anonymous pre-trial survey on their demographics, transition status, support before, during and after transition, and satisfaction with transition services provided. Descriptive statistics were used to characterize transition experiences.

**Results:** Of 375 enrolled ALHIV, 258 (69%) were female, and the median age was 18 years (IQR: 15-21). Majority (183 [52%]) had been disclosed to ≥5 years ago. All ALHIV were on ART, with 162 (43%) reporting ART use for as long as they could remember. Overall, 277 (82%) received care from the adolescent clinic and 61 (18%) were in the adult clinic- 46 (75%) having transitioned from the adolescent clinic and 15 (25%) enrolled directly into care at the adult clinic.

Majority of the transitioned adolescents (43 [94%]) reported attending clinic visits alone, 30 (70%) of whom started unaccompanied clinic visits between ages 15-19 years. Those who reported taking medication without guardian reminders were 42 (96%). Approximately half (22 [52%]) reported to have received information on self-care by the clinic. Most ALHIV received support with the transition process from the clinic (41 [89%]) and caregivers (41 [91%]). Twenty-seven (60%) reported having transition discussions during clinic visits prior to transition. While 21 (47%) were satisfied with the transition process, only 14 (31%) reported being very prepared to transition and 11 (25%) felt that having more preparation would improve the experience. Although 9 (27%) ALHIV reported that post-transition support groups were useful in coping with transition, 7 (20%) said that these were not available at the adult clinic following transition.

**Conclusions:** Few ALHIV had transitioned to adult care. While most received emotional support from the clinic and caregivers, few were prepared for the transition and support groups were important in making the transition smooth.



88

## Predictors of viral non suppression among adolescents attending care at Mildmay Uganda Hospital

Nabatte V<sup>1</sup>

<sup>1</sup>Mildmay Uganda, Infectious Disease Institute, Kampala, Uganda

**Introduction:** The Uganda Population Based HIV Impact Assessment (2016/2017) indicates that antiretroviral therapy (ART) coverage for the 0-14 years age group is 54.3% and viral load (VL) suppression is only 24.9%. In the 15-24 years age group, ART coverage is at 92.5% with VL suppression at 74.7%. VL non-suppression increases the risk of HIV transmission, and slows progress towards achievement of epidemic control by 2030 (UNAIDS).

**Methods:** We conducted a cross sectional assessment using routinely collected program data for adolescents aged 10 to 19 years receiving HIV care at Mildmay Uganda Hospital, a PEPFAR-supported site. We extracted demographic data, ART regimen, duration, adherence and VL data from October 2019 to February 2020. Adherence to ART was measured based on self-report and pill count. The VL results extracted were within 6 months from the last clinic visit date. We defined VL non-suppression as a VL >1000 copies/ml. Crude odds ratios were obtained and significant findings were included in the final multivariate model. Logistic regression analysis was performed to determine independent predictors of VL non-suppression setting statistical significance at  $p < 0.05$ .

**Results:** 1,071 adolescents had attended a recent clinic visit, of whom 47% were male and 49% aged 10 to 14 years. The median duration on ART was 9 years. VL non-suppression was observed among 144 (13%) adolescents. Of the 144 with non-suppressed VL, 131(91%) reported good adherence. 28 adolescents had Intensive Adherence Counselling (IAC) six months before their VL test and 9(32%) of these had VL non-suppression. Adolescents aged 15 to 19 years were more likely to have non-suppressed viral load compared to those aged 10 to 14 years (Adjusted Odds Ratio (AOR) 2.0, 95% Confidence Interval(CI) 1.4–2.9), ( $p < 0.001$ ). Also, adolescents on second line ART were 3 times more likely to have VL non-suppression compared to those on first line ART (AOR 3.5, 95% CI 2.4 -5.0), ( $p < 0.001$ ).

**Conclusion:** Being in the 15 – 19 year age group and on second line ART were strongly associated with viral load non-suppression among adolescents. There is need for more robust adherence monitoring strategies and an assessment of how drug resistance contributes to non-suppression.

## Case histories of the early paediatric combination Antiretroviral Therapy (cART) experience at Tygerberg Children's Hospital – the HOPE Cohort.

Houston A<sup>1</sup>, Cotton M<sup>1,2</sup>, Esser M<sup>1,3</sup>

<sup>1</sup>Hope Cape Town, Cape Town, South Africa, <sup>2</sup>FAM-CRU; Department of Paediatrics & Child Health Stellenbosch University & Tygerberg Children's Hospital., Cape Town, South Africa, <sup>3</sup>Immunology Unit, Division of Medical Microbiology, Dept of Pathology, Stellenbosch University, Cape Town, South Africa

**Background:** ART for perinatally infected children is widely available in South Africa. However the government only committed to an ART program in 2004. HOPE Cape Town (NGO) together with Tygerberg Children's Hospital staff pioneered privately sponsored ART since 2002 for HIV+ children prior to the rollout. These children represent some of the longest known public sector ART patients in South Africa.

**Method:** A retrospective folder review was done on the 37 patients who received ART sponsorship. long-term outcomes after transfer from TBH were tracked on the national health laboratory system (NHLS) websites. SA ART guidelines have require at least 1 viral load per year, so those who did not have annual blood tests were assumed LTFU or demised.

### Results:

#### Demographics:

Of the 37 patients, 20 (54%) were male. 25 (68%) started ART prior to 5 years of age; 10 (27%) between ages 6-10; and 2 (5%) between 11-13 years of age.

6 (16,2%) were sponsored after leaving an ARV trial. 2 (5,4%) were on AZT monotherapy supplied by the hospital prior to sponsorship.

#### Outcomes:

10 children (27%) have probably demised (6 confirmed, 4 assumed due to no contact with healthcare institution for >5years with deleterious last known laboratory Investigations)

6 (16%) are "Lost to follow up" (LTFU) (no laboratory Investigation for >13 months)

5 (14%) are in care but with unsuppressed viral load

16 (43%) are in care with successful viral suppression

Of those still alive, 59% had been transitioned to Primary Health Care clinics. Only 2 had left the Western Cape. The oldest patient is now 31 years of age and has had 19 years of ART.

Of those who died, the mean duration of ART was 7 years. The median age of death was 16,5years.

50% of adverse outcomes (LTFU and death) happened between age 16 – 20.

**Conclusion:** HIV is a chronic illness and ART is a lifesaving intervention for HIV+ children. However medication alone is not enough. Holistic care is needed to be given in order for children to transition in good health through adolescence to adulthood.

## Clients' satisfaction with HIV treatment services in Bamenda, Cameroon: a cross-sectional study

Buh A<sup>1,2</sup>, Atashili J<sup>2</sup>, Nde Fon P<sup>2</sup>

<sup>1</sup>University of Ottawa, Ottawa, Canada, <sup>2</sup>University of Buea, Buea, Cameroon

**Background:** Clients have explicit desires or requests for services when visiting hospitals; inadequate discovery of their needs may result in dissatisfaction. Patient satisfaction influences retention in HIV care, adherence to HAART and serves as determinant to HIV suppression. This study's objectives were to quantify clients' satisfaction with HIV services in Bamenda and determine relationship between satisfaction and clients' socio-demographic/structural characteristics.

**Methods:** A cross-sectional study was conducted on HIV-positive patients followed-up, on treatment and who consulted in the Bamenda Regional Hospital treatment centre between July and August 2014. Participants consent was sought and data collected on client's level of satisfaction to staff-patient-communication, staff attitudes, privacy and confidentiality and staffing and amenities situations in the hospital. Data was collected using a structured questionnaire interviewer-administered by investigator and trained health personnel. Collected data was analyzed using Epi Info version 3.5.4 and clients' satisfaction measured using frequencies and percentages.

**Results:** A total of 384 participants took part in this study and their median age was 37 years (IQR: 29-46). Two hundred and seventy-four (71.4%) participants were females. Overall satisfaction with HIV services was 91.2% and participants reported less satisfaction with overall staffing and amenities situation of the centre (3.6%). In the multivariate analysis, only being female, employed and perceiving high number of nurses working at the treatment centre remained significant predictors of overall satisfaction with HIV services.

**Conclusion:** A high proportion of participants expressed satisfaction with HIV services. However, some dissatisfaction is masked in this high satisfaction level. This dissatisfaction underscores need to improve staff attitudes, staff-patient-communication, employ more staff and build better patient facilities. Future studies need to focus on assessing long-term progression of satisfaction levels with services and determinants of satisfaction involving larger samples in many treatment centres.

## Health provider views on psychosocial interventions for adolescents living with HIV: A multi-country perspective

Mark D<sup>1</sup>, Ameyan W<sup>2</sup>, Essajee S<sup>3</sup>, Putta N<sup>3</sup>, Phillips L<sup>1</sup>, Nalugo S<sup>1</sup>, Oyaro P<sup>4</sup>, Fleming Y<sup>1</sup>, Hatane L<sup>1</sup>

<sup>1</sup>Pata, Cape Town, South Africa, <sup>2</sup>World Health Organization, Geneva, Switzerland, <sup>3</sup>UNICEF, New York, USA, <sup>4</sup>FACES, Kenya

**Background:** The latest data show disproportionate risk of death for adolescents living with HIV (ALHIV), and there is growing realization that this age group requires a differentiated approach. However, on the frontlines of routine service delivery, concrete adolescent mental health and psychosocial support is often overlooked.

**Materials and Methods:** In June 2019, PATA and UNICEF used a cross-sectional survey to explore health provider values and preferences of HIV service delivery interventions for paediatric age groups. The survey was implemented across the PATA network and via international NGOs, and was made available in English, French and Portuguese on a web-based platform. Data were analysed using descriptive statistics and coding to describe core elements and identify key themes.

**Results:** 324 health providers from 30 countries, primarily across sub-Saharan Africa, participated. Respondents were most commonly nurses (41%) at primary care level (44%). Providers reported the major challenges for ALHIV across the treatment cascade to be psychosocial, with the top-mentioned stressors being stigma and discrimination, diagnosis and disclosure (each 34%). At each point on the service delivery cascade – which included linkage to care, treatment initiation, retention and successful transition to adult services – providers recommended and prioritised psychosocial support and peer-based services, including individual counselling and disclosure support (31%), peer supporters (23%), support groups (16%), and caregiver engagement and support (11%).

**Conclusions:** Results indicate persistent psychological, interpersonal and social barriers as principle impediments to ALHIV service delivery. This evidence highlights that to ensure adolescents not only Survive, but also Thrive, we must urgently direct attention and resources to promote their holistic development. To improve ALHIV engagement in care, health and wellbeing, we must incorporate psychosocial interventions as key components of their service package, focusing on models that go beyond clinical management to include interpersonal strategies that target behavioural and psychosocial factors. Central to this approach must be adolescents themselves, meaningfully engaged to lead and drive service implementation. In the time of COVID-19, and for young key populations in particular, psychosocial support is an even greater imperative.

## Qualitative Analysis of a mobile WhatsApp group messaging intervention for adolescents living with HIV in Kenya

Chory A<sup>1</sup>, Martin R<sup>1</sup>, Aluoch J<sup>2</sup>, Njoroge T<sup>2</sup>, Ashimosi C<sup>2</sup>, Scanlon M<sup>1</sup>, Apondi E<sup>2,3,4</sup>, Nyandiko W<sup>2,3,4</sup>, Vreeman R<sup>1,2</sup>

<sup>1</sup>Arnhold Institute for Global Health, Department of Health Systems Design and Global Health, Icahn School of Medicine at Mount Sinai, New York,, United States, <sup>2</sup>Academic Model Providing Access to Healthcare (AMPATH), Eldoret, Kenya, <sup>3</sup>Moi Teaching and Referral Hospital, Eldoret, Kenya, <sup>4</sup>Department of Child Health and Paediatrics, School of Medicine, College of Health Sciences, Moi University, Eldoret, Kenya

**Introduction:** Mobile platforms are novel and scalable technologies for intervention delivery. There are few studies using these platforms to target adolescents living with HIV (ALWH) in low- and middle-income countries. We conducted an observational pilot study to assess engagement and value of a WhatsApp group messaging intervention to deliver peer support and mental health counseling to ALWH in western Kenya.

**Methods:** Participants (N=29) were ALWH aged 10-19 years, HIV-disclosed and engaged in care at a comprehensive HIV clinic in Kenya. Participants were enrolled for six months and provided with a SIM card and smartphone with WhatsApp chat application installed. We used a multimedia curriculum that was informed by formative qualitative work with an ALWH cohort, and included group discussion modules on stress management, drug and alcohol abuse prevention, intimate relationships, and issues related to HIV adherence, disclosure, and stigma. A trained pediatric HIV adherence and disclosure counselor facilitated the group chats to encourage positive support between participants, to introduce weekly group discussion topics, and to answer questions. Participants were given a pseudonym to maintain confidentiality in the chats. All WhatsApp chats from the six month intervention were downloaded and translated into English for analysis. Inductive thematic analysis of the transcripts was led by two researchers (AC and RM) who identified preliminary codes and subsequent themes using Dedoose software (Sociocultural Research Consultants, LLC). Preliminary codes were further refined, reviewed and analyzed by an additional researcher (JA). Participants aged 18 years or older provided informed consent; participants younger than 18 years of age provided assent and consent from the minors' caregivers.

**Results:** Participants demonstrated particular interest in conversations around HIV literacy, navigating relationships, and experiences with stigma. Adolescents discussed side effects of ARVs, provided support and suggestions to ALWH experiencing challenges around adherence, and HIV transmission methods. Participants shared the value of trustworthy relationships and the importance of intentional disclosure to friends and romantic partners. They identified the emotional impact of non-disclosure in their relationships and the steps they take to maintain secrecy, including hiding medication bottles and sneaking away from a group to keep time. Adolescents described challenges in the school setting, including maintaining adherence without accidental disclosure and navigating HIV-related stigma by teachers and classmates. Participants described similar stigma and disclosure related experiences in the home, and offered tactics and solutions to these challenges. Religion played a significant role, providing a sense of hope and protection for the ALWH. Evening prayer was considered a priority and routinely led by participants. Notable barriers to participation in the group included scheduling conflicts with school related responsibilities, parents limiting cell phone use, and prolonged community loss of electricity which prevented charging of cell phones.

**Conclusion:** The content discussed suggests that this could be a valuable platform for ALWH, as it provides an opportunity to share experiences, fears, questions and advice related to HIV that would otherwise remain secret. Future studies should further investigate ALWH engagement in WhatsApp delivered interventions for peer support, including assessing its effectiveness in improving HIV adherence and clinical outcomes.

93

## A Battle of the Mind to Adherence: Lessons Learnt From Kenyan AYPs

Otieno B<sup>1</sup>

<sup>1</sup>Alfajiri NETWORK, Nairobi, Kenya

**Background:** HIV infection has been associated with mental health some conditions, but there seem to be no or little data existing on HIV-Associated Neurological Disorders especially among Sub-Saharan Africa Adolescent and Young People 15-24 years living with Prenatally Acquired HIV. AYPs living with HIV tend to experience more anxiety than the general population. Y+ Kenya and Alfajiri evaluated anxiety and its association to adherence among young people.

**Method:** AYPs aged 18-24yrs both young men and women were randomly sampled from 3 youth WhatsApp groups in Nairobi County in Kenya. A structured Quantitative questionnaire was administered via Google docs between May and November 2019. The questionnaire collected demographic (age and gender), medical history (year on ART, viral load, if HIV Prenatally Acquired & ART Regimen) and Psychological data. The psychological assessment tools used were APA approved from Psyche- Central. Descriptive statistics were used to analyze the data.

**Results:** The study engaged 102/379 AYPs who fully consented to participate in the survey with boys and girls 57% (n=58) and 43% (n=44) 17-24yrs on treatment for more than 5 years respectively. Achieved Viral suppression was reported at 46%. No clear link between Anxiety and regimen line. 49% of those reported to have experienced anxiety were Young people living with Prenatally Acquired HIV. Anxiety Episodes reported was most common among young men 20-24yrs with young women being at 32% (n=33) cases of experienced anxiety for the past six months before the study time. Among the ones experiencing Anxiety, 67% (n=37) fell within the not virally suppressed group of young people.

**Conclusion:** Anxiety has an immense impact on adherence as relayed from the high numbers of viral unsuppressed and it's most dominant among young men 20-24yrs compared to young women of the same age. Adherence is not only dependent on treatment. Need to develop a scorecard/matrix to monitor mental health indicators of AYPLH during clinical assessments should be developed. As data relied on self-report, recall bias may apply.

## What do adolescents affected by HIV value most? Aspirations and self-perceptions from a large cohort study in South Africa.

Chen J<sup>1</sup>, Rudgard W<sup>1</sup>, Toska E<sup>1,2</sup>

<sup>1</sup>Department of Social Policy and Intervention, University of Oxford, Oxford, United Kingdom, <sup>2</sup>Department of Sociology, University of Cape Town, Cape Town, South Africa

**Background:** Adolescence is a crucial stage when life aspirations emerge. Having aspirations and positive self-perceptions have been linked with better health outcomes in adolescents. Stigma and other complex factors could limit the aspirations and self-perceptions of adolescents living with HIV (ALHIV). The overall aim of the study is to describe and compare aspirations and self-perceptions of ALHIV and their HIV-exposed uninfected peers in South Africa.

**Methods:** A cross-sectional study (Mzantsi Wakho) interviewed adolescents in South Africa at baseline in 2014-2015. Study participants were aged 10-19, 55% female, and included ALHIV n = 1064 and uninfected peers n = 455. Qualitative and quantitative descriptive analysis was conducted on two open-ended questions which asked about (1) their job aspirations, and (2) what they are most proud of about themselves. Associations between major themes identified from qualitative analysis and HIV status were evaluated using bivariable and multivariable logistic regression adjusting for sociodemographic factors.

**Results:** Qualitative analyses of open-ended questions identified a high percentage (68%) of adolescents had aspirations for careers requiring tertiary education, including Health Care Professionals. However, over 55% of the participants reported delayed grade progression – being at least one grade behind their expected grade-for-age. Nevertheless, adolescents were most proud of their educational achievements (22%), relative to 9 other major themes (all mentioned by ≤15% participants) identified from question (2). Quantitative multivariable analysis showed no evidence of a significant association between HIV status and thematic aspirations and self-perceptions identified in the qualitative analysis. Instead, significant differences in aspirations and self-perceptions were associated with gender. For example, 36.1% (95%CI 32.9-39.3%) of female participants expressed aspirations to become Health Care Professionals, double the proportion of male participants expressing the same aspirations (18.3% 95%CI 15.4-21.3%).

**Conclusions:** Future policies should focus on closing the gap between adolescents' perceived value of education and future aspirations, and the current reality of social and economic inequalities in South Africa. Our findings encourage including ALHIV in youth-friendly HIV-sensitive programmes alongside other equally underserved and underprivileged adolescents to avoid stigma. Future interventions can help improve adolescent psychosocial well-being through helping them achieve their aspirations and positively influence their self-perceptions.

## Sexual violence and violence within relationships among adolescents living with HIV in Mozambique

**Brittain K<sup>1</sup>**, Zerbe A<sup>2</sup>, Falcao J<sup>2</sup>, Chakhtoura N<sup>3</sup>, Abrams E<sup>2,4</sup>

<sup>1</sup>Division of Epidemiology & Biostatistics, School of Public Health & Family Medicine, University of Cape Town, Cape Town, South Africa, <sup>2</sup>ICAP at Columbia University, Mailman School of Public Health, New York, United States, <sup>3</sup>Eunice Kennedy Shriver National Institute of Child Health and Human Development, Bethesda, United States, <sup>4</sup>Vagelos College of Physicians & Surgeons, Columbia University, New York, United States

**Background:** Adolescence is a critical phase of biological and psychosocial development, but normative experiences are complicated for adolescents living with HIV (ALHIV). In particular, relationships and sexual behavior are challenging in the context of a highly stigmatized diagnosis. Further, violence is widespread in many low-resource countries, including in Mozambique, but there are few insights into violence within relationships among ALHIV in this setting.

**Methods:** We conducted a cross-sectional survey among ALHIV ages 15-19 years. Adolescents were recruited from HIV services within three health facilities in Nampula, Mozambique, and completed interviews assessing demographic and relationship characteristics, sexual behavior and intimate partner violence (IPV). Analyses compared reported sexual behaviors and IPV across adolescent gender. Emotional violence was defined as report of a partner insulting, swearing, or saying something hurtful; physical violence as pushing, shoving, grabbing or slapping; and sexual violence as engaging in any sexual activity against the adolescent's will.

**Results:**

A total of 146 girls [median age: 18 years, inter-quartile range (IQR): 17-19] and 62 boys (median age: 17, IQR: 15-18) were interviewed. A history of sexual activity was reported by 74% of girls and 52% of boys, with the median age at sexual debut 16 years (IQR: 15-17) and 15 years (IQR: 14-16), respectively. Among both girls and boys reporting a history of sexual activity, 23% reported that their first sexual encounter was forced or coerced, and 15% reported having had transactional sex. Among adolescents reporting a relationship during the past year (girls: n=118; boys: n=43), IPV was commonly reported: 26% reported experiencing at least one act of emotional, 9% physical, and 11% sexual violence during the past year, with no differences across gender. Similarly, no differences were observed in the proportion of girls and boys reporting that they have perpetrated emotional (11%), physical (4%) or sexual violence (2%) at least once during the past year.

**Conclusions:** These data suggest that transactional and forced or coerced sex are common among ALHIV who report a history of sexual activity in Mozambique. In addition, violence within relationships is commonly reported, highlighting the urgent need for supportive interventions in this setting.



## When and how do individuals transition from regular drug use to injection drug use in Uganda? Findings from a rapid assessment

Nsubuga S<sup>1</sup>, Wamala T<sup>1</sup>

<sup>1</sup>Uganda Harm Reduction Network, Kampala, Uganda

**Background:** In Uganda, injection drug use is a growing but less studied problem. Preventing the transition to injection drug use may help prevent blood-borne viral transmission, but little is known about when and how people transition to injection drug use. A greater understanding of this transition process may aid in the country's efforts to prevent the continued growth of injection drug use, HIV, and hepatitis C Virus (HCV) infection among people who inject drugs (PWID).

**Methods:** Using a rapid situation assessment framework, we conducted semi-structured interviews among 125 PWID (102 males and 23 females)—recruited through outreach and snow-ball sampling. Participants were interviewed about their experiences on when and how they transitioned into injection drug use and these issues were also discussed in 12 focus groups held with the participants.

**Results:** All the study participants started their drug use career with non-injecting forms including chewing, smoking, and sniffing before transitioning to injecting. Transitioning was generally described as a peer-driven and socially learnt behavior. The participants' social networks and accessibility to injectable drugs on the market and among close friends influenced the time lag between first regular drug use and first injecting—which took an average of 4.5 years. By the age of 24, at least 81.6% (95.7% for females and 78.4% for males) had transitioned into injecting. Over 84.8% shared injecting equipment during their first injection, 47.2% started injecting because a close friend was already injecting, 26.4% desired to achieve a greater “high” (26.4%) which could reflect drug-tolerance, and 12% out of curiosity.

**Conclusions:** Over 81% non-injecting drug users in Kampala and Mbale districts transitioned into injecting by the age of 24; a process that reproduces a population of PWID but also puts them at increased risk of HIV and HCV infection. As Uganda makes efforts to introduce and/or strengthen harm reduction services, interventions targeting non-injecting drug users before they transition into injecting should be considered as a key component for HIV/HCV epidemic control efforts, and their evaluation considered in future researches.

## Perspectives of education sector stakeholders on a HIV teacher training module to reduce HIV/AIDS stigma in Western Kenya

Nyandiko W<sup>1,3</sup>, Biegon W<sup>1</sup>, **Chory A<sup>2</sup>**, Aluoch J<sup>1</sup>, Ashimosi C<sup>1</sup>, Munyoro D<sup>1</sup>, Callen G<sup>4</sup>, Scanlon M<sup>2</sup>, Wachira J<sup>1,5</sup>, Apondi E<sup>1,3</sup>, Vreeman R<sup>1,2</sup>

<sup>1</sup>Academic Model Providing Access to Healthcare (AMPATH), Eldoret, Kenya, <sup>2</sup>Arnhold Institute for Global Health, Department of Health Systems Design and Global Health, Icahn School of Medicine at Mount Sinai, New York, United States, <sup>3</sup>Moi Teaching and Referral Hospital, Eldoret, Kenya, <sup>4</sup>Indiana School of Medicine, Indianapolis, United States, <sup>5</sup>Department of Behavioral Science, School of Medicine, College of Health Sciences, Moi University, Eldoret, Kenya

**Background:** For adolescents living with HIV (ALWH) in resource-limited settings, HIV/AIDS stigma (H/A stigma) at school, where they spend most of their time, is a common experience, yet few interventions target H/A stigma in school settings. We created a multi-media training module for teachers to address stigmatizing knowledge, attitudes, and beliefs about HIV in Western Kenya. The module consisted of videos on HIV, role-play scenarios for teachers based on common classroom experiences, shared narratives or testimonials from ALWH, case scenario discussions and thematic presentations. We sought to use key informant and cognitive interviews to maximize the acceptability, understandability, face validity, and cross-cultural adaptation of the training module.

**Methods:** Semi-structured interviews were conducted with 50 Subject Matter Experts (SME), including teachers, school administrators, healthcare providers and Kenyan adolescents (HIV positive and negative) to review the module. Cognitive interviewing techniques were used to assess participants' acceptance of concept, ability to understand the terms, the perceived importance of the intervention and appropriate audience and suggested improvements. Interviews were conducted in Kiswahili or English, audio-recorded, translated and transcribed. Deductive thematic analysis was led by two investigators (AC and WB), to identify and extract themes using the software program, Dedoose (SocioCultural Research Consultants, LLC).

**Results:** All stakeholders thought that reducing H/A stigma in the classroom was an important aim to pursue, that concepts and terms were appropriate, easily understandable and culturally relevant. Many participants discussed the potential impact of the intervention on H/A stigma, noting that providing accurate information would help the audience to better understand the reality of HIV and therefore reduce stigmatizing behavior. Although there was a range of responses about appropriate audiences, participants agreed with targeting school teachers, noting the importance of teacher support for ALWH, particularly around adherence to medication and stigma reduction. Participants suggested expanding the teacher training outside of the classroom/school, including providing resources in clinical settings in patient waiting areas, broadcasting the videos on television stations during commercial breaks, posting on social media and in community newspapers, and training government officials during county meetings. Participants found the use of teachers to portray interactions between ALWH and teachers during a school setting role play to be beneficial in eliciting empathy, as well as allowing teachers to practice how best to handle challenging situations. Participants had several important suggestions for areas of improvement, including incorporating individuals living with HIV into the training to give real examples, adding pictures and colors to the paper resources, and providing a version of the training in Kiswahili for individuals with limited English proficiency.

**Conclusion:** Stakeholders reported the importance of reducing H/A stigma in the classroom. The multi-media training module was perceived as having face validity, was acceptable, and had the potential to improve teacher-learner interactions in the classroom.

98

## Strengthening Adolescent-Friendly Service Package in Nigerian Military Health Facilities to Improve HIV Viral Load Suppression

**Lawal P**, Yakubu A<sup>1</sup>, Chittenden L<sup>1</sup>, Okonkwo D<sup>2</sup>, Adebayo-Abikoye E<sup>2</sup>, Okeji N<sup>3</sup>, Salawu K<sup>3</sup>, Lee E<sup>4,5</sup>, Akom E<sup>4</sup>

<sup>1</sup>USAMRD-A/N, Abuja, Nigeria, <sup>2</sup>Henry Jackson Foundation MRI, Abuja, Nigeria, <sup>3</sup>Nigerian Ministry of Defense-Health Implementation Program, Abuja, Nigeria, <sup>4</sup>U.S. Military HIV Research Program, Walter Reed Army Institute of Research, Silver Spring, US, <sup>5</sup>Henry M Jackson Foundation for the Advancement of Military Medicine, Bethesda, US

**Background:** The Nigerian Ministry of Defense Health Implementation Programme (NMOD-HIP) supported by the U.S. Military HIV Research Program, responded to sub-optimal adolescent viral load (VL) suppression, by strengthening package of adolescent friendly services to improve ART adherence and viral suppression in October 2018. We reviewed preliminary implementation and health outcomes from three military treatment facilities.

**Materials and Methods:** Three high volume Nigeria military facilities (DHQ MC, 44 NARHK and MHPH) with poor viral suppression rates (VL <1000c/mL) among adolescent patients. The intervention included orientation for providers on adolescent friendly services, disclosure orientation for caregivers, and focused adherence monitoring, with monthly audit of patient charts to identify virally unsuppressed adolescents. We examined monthly trends in VL suppression by facility over five months.

**Results:** Between November 2018 and March 2019, 130 adolescents enrolled in the program. Following the intervention, in November the VL suppression in those eligible in DHQ MC, 44 NARHK and MHPH increased to 100%, 80%, and 79%, from 68%, 74% and 67%, respectively. DHQ MC sustained this performance through January 2019, dipping to 60% in February and increasing to 100% in March. DHQ conducted adolescent meetings extensive tracking. 44 NARHK and MHPH conducted re-orientation for care providers and engagement of adolescent champions, resulting in improved performance the following month. VL suppression at 44 NARHK improved to 100% by March.

**Conclusion:** The implementation of intensive, patient-centered interventions for adolescents is critical to keeping them virally suppressed. Health care providers will need to commit time and effort to making adolescents services visible, flexible, affordable, confidential and culturally appropriate. Lessons from this intervention may inform other programs with low viral load suppression among adolescents.

## Building parenting programmes into adolescent HIV care

Wallace M<sup>1</sup>, Ronan A<sup>1</sup>, Mbule M<sup>1</sup>, Schmitz K<sup>1</sup>

<sup>1</sup>mothers2mothers, Cape Town, South Africa

The relationship between abusive parenting and adolescent sexual risk behaviours is recognized and the value of family interventions to improve parent-adolescent communication and positive parenting practices has been identified as a promising means of impacting HIV prevention. As part of a larger project aimed at impacting HIV outcomes in adolescent girls and young women in Khayelitsha informal settlement in Cape Town, South Africa, mothers2mothers (m2m) partnered with Clowns without Borders South Africa to implement the Sinovuyo Teen Parenting Programme, targeting adolescents 10 to 18 years, and their caregivers.

The programme uses culturally relevant approaches based on core principles found in evidence-based parenting programmes globally, delivered at community level. A 5-day training programme was delivered to 14 m2m field staff. Parenting sessions were then held with six caregiver-adolescents pairs in one group over three months. We report on an evaluation of the feasibility, acceptability and outcomes of this pilot programme.

The evaluation included five caregiver-adolescent pairs completing all intervention sessions. All provided positive feedback about participating in the parenting sessions, commenting on the impact on their relationships, and the value of learning from and interacting with other caregivers and adolescents. For adolescents, changes to the adolescent/caregiver relationship centred on spending more time together and fighting less with their caregiver; while caregivers spoke of learning the value of praising their children. Many participants described a growing 'friendship' with their caregiver/child. There was a trend towards decreasing negative parenting practices; improvements in relationships and interactions; and a reduction in certain risk behaviours in adolescents. All participants noted improvements in their ability to cope with feelings of sadness, and all caregivers noted decreased stress related to parenting since the intervention. Although a small and potentially biased sample, the evaluation demonstrated promising findings in terms of outcomes and acceptability.

Feasibility and acceptability issues were however recorded related to session attendance, noted to be challenging due to distance from where sessions were held; accommodating sessions around extra school classes; and the high number of sessions. Ways of addressing these barriers, and integrating this intervention into adolescent services going forward will be discussed.

100

## HIV- and hepatitis C-related risk behaviors among people who inject drugs in Uganda: implications for policy and programming

Nsubuga S<sup>1</sup>, Wamala T<sup>1</sup>, Ajuna S<sup>1</sup>

<sup>1</sup>Uganda Harm Reduction Network, Kampala, Uganda

**Background:** There is a dearth of evidence on injecting drug use and associated HIV and hepatitis C virus (HCV) infections in Uganda. As such, policy and programming for people who inject drugs (PWID) is limited due to scarcity of epidemiological data. We therefore conducted this study to assess the injecting drug and sexual practices among PWID in Kampala Capital City and Mbale Municipality.

**Methods:** Using a rapid situation assessment framework, we conducted semi-structured interviews among 125 PWID (102 males and 23 females)—recruited through outreach and snowball sampling. We assessed their injecting drug and sexual practices. We also conducted 12 focus group discussions among PWID and 30 in-depth interviews among key informants.

**Results:** A total of 125 PWID (81.6% males and 18.4% females) were recruited into the study. Approximately three quarters of PWID started injecting before the age of 25. More females (21.7%) compared to males (13.7%) started injecting by the age of 17. Fifty-seven percent of the PWID in Kampala and 50% in Mbale shared injecting equipment in the last 3 months prior to the study. There was an emerging practice of mixing drugs with blood and sharing it among different PWID as a sign of oneness. Heroin was being injected by 72% of the participants. Less than one half of the PWID had used a condom during the last casual sex, and 42.7% did not use a condom the last time they engaged in sex work. Seventy-six percent of the PWID had undertaken an HIV test in the last 12 months, and 9.2% self-reported to be HIV positive.

**Conclusions:** This study highlights the need for introducing harm reduction policies and services including increased access to sterile injecting equipment and education around safer injecting and sexual practices. Programs for PWID should also address the specific needs of female sex workers who inject drugs.

101

## Assessing The Social And Psychological Impact Of Covid-19 And The Lockdown On Young People (18-25yrs) In Harare, Bulawayo And Mutare- An Online Survey

Mukwekwerere P<sup>1</sup>

<sup>1</sup>University of Zimbabwe-College of Health Sciences-Clinical Trials Unit, Harare, Zimbabwe

**BACKGROUND:** Humans are social beings and isolation has been shown to lead to adverse mental health outcomes. Due to the Coronavirus Disease-2019 (COVID-19) pandemic, countries, including Zimbabwe, imposed lockdowns. Families were confined to their homes and this study aims to assess the social and psychological impact of the COVID-19 pandemic and the lockdown on young people (18-25yrs) in three major cities in Zimbabwe.

**MATERIALS AND METHODS:** Data was collected through an online survey(n=180) and virtual in-depth interviews(n=9). For each city, three strata were randomly selected using the stratification method: low, medium and high-density area. The survey was linked to Open Data Kit (ODK), KoBoCollect. Quantitative data analysis was done using the SPSS version 20 statistical package and thematic analysis was done for qualitative data.

**RESULTS (Quantitative component):** A sample of 180 participants (youths of 18-25years) responded to the questionnaire from three cities in Zimbabwe, with diverse cultures, namely; Harare, Bulawayo and Mutare. Females formed the majority of the youths with a representation of 53.33%, while males were represented by 46.67% of the sample of youths. The majority of the young people were single(90.56%) and most of them had a tertiary level education 88.3%. Ninety-five percent of youths were Christians and 55.22% of them were unemployed.

Use of social media and participation in household chores was noted to have increased and this was statistically significant. There was increased eating and altered sleeping patterns, especially difficulties in sleeping; increase in drug use, loneliness and feelings of depression due to uncertainty about the future and this was also statistically significant.

**CONCLUSIONS:** The increased use of social media highlights the need of the young people to connect to other people that they could not connect to physically. The increase in household chores was a consequence of increased presence at home while increased eating and altered sleeping patterns are a sign of anxiety which has resulted from COVID-19 and the lockdown. There was also increase in drug use, loneliness and feelings of depression due to uncertainty about the future. These data call for action in supporting young people to cope during times of crisis.

102

## Rates Of Virological Failure/Suppression Amongst Adolescents On Lifelong ART At Botswana-Baylor

Farirai J<sup>1</sup>, Chida N<sup>1</sup>, Matshaba M<sup>1,2</sup>, Sathyamoorthi A<sup>1</sup>

<sup>1</sup>Botswana-baylor Children's Centre Of Excellence, Gaborone, Botswana, <sup>2</sup>Baylor College of Medicine, Houston, Texas, United States

**Background:** Antiretroviral therapy (ART) is effective in achieving viral suppression if adequately adhered to and this will lead to immune restoration or prevent immune deterioration, keeping persons living with HIV alive and healthy. Adherence to ART has been reported to be lower amongst adolescents compared to adults, with several studies documenting higher rates of virological failure amongst the former. The study was done at Botswana Baylor Children's Clinical Centre of excellence which manages children, adolescents and young adults living with HIV. Currently the clinic has over 2406 patients on ART.

### Methods:

A cross-sectional study was conducted in April 2018. All data on adolescents (10-19 years) with virological failure was collected from the clinic data base and analyzed. Virological failure was defined as 2 consecutive VL >1000 copies/ml in the past 6 months according to criteria. Viral suppression was defined as

### Results:

There were 1245 adolescents aged 10-19 years on ART. Of these, 98 (8%) had virological failure, and viral suppression was 92%. The virological failure rates were similar amongst Females (92, 8%) and Males (91, 2%). The suppression rates were also similar amongst younger and older adolescents: (10-14yrs) = 92.7% and (15-19) = 91.2%. Of the n=98 failing treatment, 20% (n=20) had CD4 count  $\leq$  350 cell/ $\mu$ L whilst 13% (n= 12) had a CD4<200 cells/ $\mu$ L.

### Conclusions:

Viral suppression rates among adolescents on ART at Botswana-Baylor were high and comparable to adult populations, despite the additional psychosocial burdens adolescents often face. Although more research is required, these findings suggest that comprehensive adherence and psychological support can be effective in improving treatment outcomes amongst adolescents on lifelong ART. A significant proportion of those with virological failure also had poor immune responses. Hence, they do need adequate prophylaxis and adherence support to reduce morbidity and mortality. Similar studies in public health facilities are required to monitor virological outcomes among this vulnerable population.

103

## Assessing mental health challenges among Adolescents living with HIV in Zambia

Munthali V<sup>1</sup>, Banda T<sup>1</sup>, Kayumba B<sup>1</sup>

<sup>1</sup>Centre For Infectious Disease Research In Zambia, Lusaka, Zambia

**Introduction:** Mental health is a critical and neglected global health challenge for adolescents infected with HIV particularly in resource-limited settings where the prevalence of adolescents living with HIV is high. Globally, suicide, depression and substance abuse are recognized as the major problem surrounding mental health particularly among adolescents living with HIV thus affecting their HIV treatment and care. Provision of mental health services among adolescents living with HIV are thus cardinal in reaching the 95-95-95 UNAIDS targets. Yet, mental health gaps among adolescents living with HIV still persist particularly in low middle income countries such as Zambia. This qualitative research aimed at assessing mental health challenges among adolescents living with HIV in Zambia.

**Methodology:** A qualitative approach using semi-structured questionnaires was conducted in 6 youth friendly health facilities of Chongwe, Lusaka and Kaoma districts. 18 semi-structured questionnaires were administered among 18 (9 F, 9 M) adolescents living with HIV in order to assess various mental health challenges.

**Results:** The research showed that 15(83.3%) of the participants identified mental health as a challenge among adolescents living with HIV. Only one out of the six health facilities provides mental health services. While substance abuse, depression and anxiety were among the identified mental health challenges adolescents living with HIV experience with 80% of the adolescents having felt that they do not receive adequate support from health facility staff when it comes to their mental well being thus shun away from seeking mental health services from the facilities.

**Conclusion:** There is need to bridge the existing mental health gaps among adolescents living with HIV in Zambia by scaling up youth friendly mental health services in health facilities of Zambia. There is also need to integrate mental health programs in HIV/AIDs interventions in order to reach the UNAIDS 95-95-95 targets.



104

## Increasing HIV linkage To Care and Retention Among PLHIV through Community Centered Approach: Lessons Learnt During COVID-19 in FCT & Implication for Adolescent Health Programming in Nigeria.

Ejeckam O<sup>1</sup>, Onwubiko C<sup>2</sup>, Ejeckam C<sup>3</sup>

<sup>1</sup>Diadem Consult, Nigeria, Abuja, Nigeria, <sup>2</sup>Diadem Consult, Nigeria, Abuja, Nigeria, <sup>3</sup>Centre for Global Public Health, University of Manitoba, Abuja, Nigeria

**Background:** Retaining PLWHIVs on Anti-Retroviral treatment is critical in the fight towards epidemic control of the HIV/AIDs disease in Nigeria. Attrition and low retention in care amongst PLWHIVs has been identified as a rate-limiting gap in the drive towards reducing the burden of HIV disease. The Action to Control HIV Epidemic through Evidence (ACHIEVE) project, following the restrictions during the COVID-19 period, adapted various means to ensure that PLWHIVs continue to receive care and treatment services, increase new enrollment, and reduce attrition.

**Materials & Method:** (a) Optimization of mobile refills and viral load collection (b) effective application of the multi- month scripting of ARV drugs to most clients, especially those living in far and distant FCT neighborhoods,(c) provision of health worker permit to all community service officers ( e.g. Counsellor Testers, Laboratarians) and the use of project vehicles which served as mobile One-Stop Shops (OSS),(d) introduction of dried blood spot (DBS) for viral load sample collection, alongside sample collection via plasma (e) OSS counselor testers and client trackers were sourced amongst community members.

### Result

Over a 5 months period, 970 PLWHIV were reached during the lockdown with about 6892 condoms distributed via community outreaches and mobile OSS facilities. 197 PLWHI had their drug refills while about were newly enrolled into care. A total of 71 PLWHIV had their samples collected for viral load with 36 of them achieving viral suppression (51% suppression rate). 63 persons were newly enrolled into care while mobile counselling was provided. Capacity building through trainings increased the technical expertise of skilled staff.

**Conclusions:** Programmes should be flexible and adopt strategies that seek alternatives in achieving set goals and objectives without compromising quality. This experience has birthed a new frontier which Nigeria can strengthen in the light of the current COVID- 19 challenges in ensuring that many young people test for HIV, with identifies +ves being linked and retained in care. This approach can be scaled across structurally to other program areas, e.g. adolescent and young people (AYP) programmes to ensure that young people in Nigeria do not lack access to optimal HIV care services.

105

## HIV vulnerability among Adolescent Girls and Young Women (AGYW) enrolled for DREAMS program in Zimbabwe

Mafaune H<sup>1</sup>, Mudzengerere F<sup>1</sup>, Tafuma T<sup>1</sup>, Dakwa D<sup>1</sup>, Mundingi R<sup>1</sup>

<sup>1</sup>Fhi 360, Harare, Zimbabwe

**Background:** Adolescents and young women (10 to 24 years) continue to be disproportionately affected by HIV. We examine the prevalence of individual- and household-level factors used to define HIV vulnerability among AGYW enrolled in the DREAMS program.

**Methodology:** A cross-sectional study was conducted to assess' risks and vulnerabilities of AGYW enrolled in the DREAMS program across the 6 DREAMS districts in Zimbabwe from the 1st of October 2018 to the 30th of September 2019. Data was collected and captured in Access databased by trained in-school and out of school club facilitators using a paper-based data collection tool. We calculated and compared the proportion of AGYWs with various Risks and vulnerabilities. We used STATA version 15.0 to perform the calculations.

**Results:** A total of 79016 AGYW were risk screened of whom 35712 (45%) were out of school while 43304 (55%) were attending school. Prevalence of sexual violence was 2.5% (907/35712) and 0.7% (305/43304) for out of school and in school AGYW respectively. 6% (4740/79016) of the girls reported having engaged in multiple sexual relationships of whom 35% were 10-14 years old. Prevalence of transactional sex was 4% (1544/35712) and 4% (1823/43304) for out of school and in school AGYW respectively. The prevalence of Sexually transmitted disease was 3.3% (1178/35712) and 1.3% (563/43304) for out of school and in school AGYW respectively. Transactional sex was associated with sexual violence OR 5.3 (95%CI 4-7), physical and emotional violence OR 5.5 (95%CI 4.2-7.3)

**Conclusions:** The study observed a high a high prevalence transactional sex across all age groups and we recommend strengthening of interventions targeting self-reliance among adolescents and young women.

Abstract 106 is withdrawn

107

## Cost-effectiveness and Feasibility of Conditional Economic Incentives and Motivational Interviewing to Improve HIV Health Outcomes of Adolescents Living with HIV in Anambra State, Nigeria

Ekwunife O<sup>1</sup>, Ofomata C<sup>1</sup>, Okafor C<sup>2</sup>, Ugonwa M<sup>1</sup>, Kalu S<sup>3</sup>, Ele P<sup>3</sup>, Eleje G<sup>3</sup>

<sup>1</sup>Nnamdi Azikiwe University, Awka, Nigeria, <sup>2</sup>School of Medicine, Griffith University, , Australia, <sup>3</sup>Nnamdi Azikiwe University Teaching Hospital, Nnewi, Nigeria

**Background:** In sub-Saharan Africa, there is increasing mortality and morbidity of adolescents due to poor linkage, retention in HIV care and adherence to antiretroviral therapy (ART). This is as a result of limited adolescent-centred service delivery interventions. This cost-effectiveness and feasibility study is piggybacked on a cluster-randomized trial that assessed the impact of an adolescent-centred service delivery intervention. The intervention examined the impact of an incentive scheme consisting of conditional economic incentives and motivational interviewing on health outcomes of adolescents living with HIV in Nigeria.

**Method:** A cost-effectiveness analysis from the healthcare provider's perspective was performed to assess the cost per additional patient achieving undetected viral load through the proposed intervention. The cost-effectiveness of the incentive scheme over routine care was estimated using the incremental cost-effectiveness ratio (ICER), expressed as cost/patient who achieved an undetectable viral load. A one-way sensitivity analysis examined the effect of the regimen change to Dolutegravir-based combination (which occurred during the trial) on the ICER. A qualitative study using an in-depth interview was conducted on the healthcare personnel in the intervention arm to explore the feasibility of the use of the service delivery intervention, as well as explore the attitude of the adolescents towards the intervention.

**Result:** The ICER of the intervention compared to routine care was US\$1,593.2 per additional patient with undetectable viral load. Going by the cost-effectiveness threshold suggested by the World Health Organization (WHO) Commission on Macroeconomics and Health (WHO-CHOICE) estimates, the intervention is very cost-effective as it costs less than one Nigerian GDP/capita of US\$2028.2. The effect of regimen change increased the ICER to US\$2,094.38. Healthcare professionals reported that patients' acceptability of the intervention was very high.

**Conclusion:** The conditional economic incentives and motivational interviewing were very cost-effective. Patients' acceptability of the intervention was very high. However, healthcare professionals believed that sustaining the intervention may be difficult unless factors such as government commitment and healthcare provider diligence are duly addressed.

108

## Adopting Innovative Youth-led Social Behavioral Communication Change Interventions to Promote HIV Prevention amongst Adolescent and Young People in Botswana

*Tswetla N<sup>2</sup>, Chuwa V<sup>1</sup>, Segodi J<sup>1</sup>, Gaboiphiwe C<sup>2</sup>, Kakambi M<sup>1</sup>, Chukwudozie A<sup>1</sup>*

*<sup>1</sup>UNICEF, Gaborone, Botswana, <sup>2</sup> National AIDS and Health Promotion Agency (NAHPA), Gaborone, Botswana*

**Background:** In Botswana, HIV prevalence among young people aged 15-24 continues to remain high, 9.3 per cent among females and 5.0 per cent among males. Of greater concern, three in every ten new HIV infections in Botswana occur among adolescents and young people aged 15-24 years, majority among girls and young women (69%). Reasons for this include age of sex debut, inconsistent condom use, age-disparate and transactional sex, peer pressure, GBV and not knowing one's HIV status.

**Methods:** UNICEF Botswana collaborated with NAHPA and Young1love introduced MTV Shuga Radio Drama, a mass-media behavioural change campaign, developed by MTV Staying Alive Foundation, that uses the edutainment model to explore the social complexities of negotiating safer sexual and lifestyle decisions in order to increase HIV prevention. A multi-media approach consisting of radio, peer education, and community mobilisation were used to scale up coverage and deepen impact. The innovative 124 Interactive Voice Response (IVR) platform was also introduced to amplify access to the radio drama series and strengthen interaction and engagement with young people. Pre- and post-exposure tests were conducted to measure the reach and impact of the intervention.

**Results:** The radio show reached over 100,000 AYPs and achieved an impact of 12.2 per cent. Interpersonal communications had an impact of 16.8 per cent and reached 6000 AYPs through school rallies and 244 AYPs through peer education. IVR achieved a total listenership of 67,483 and an impact of 1.4 per cent. Overall, radio achieved the widest reach while peer education/interpersonal communications achieved the highest positive impact. IVR was very popular and enabled AYP access the radio drama at their own convenience, spurring the introduction of an interactive game in the second season.

**Conclusions:** The programme was well-received and had an impact on the knowledge, attitudes, and behaviours of AYP. The media mix used has supported young people with information and skills to help them make good choices for healthier lives. Lessons learnt and results from Season One have catalysed scaled-up implementation and leveraged resources from Global Fund for expansion of quality peer education for in and out of school youth in priority districts.

109

## The Use and Development of Youth-created Digital Cartoons to Address Stigma, Discrimination, and Shame Faced by Adolescents and Youth Living with HIV

Vinho T<sup>1</sup>, Mahlasera R<sup>1</sup>, Andifasi P<sup>1</sup>, Moore S<sup>2</sup>, Lenz C<sup>3</sup>, Ombija M<sup>3</sup>

<sup>1</sup>Elizabeth Glaser Pediatric AIDS Foundation Zimbabwe, , Zimbabwe, <sup>2</sup>Avert, Brighton, United Kingdom, <sup>3</sup>EGPAF Global, Washington D.C., United States

**Introduction:** Stigma and discrimination remain significant challenges faced by adolescents and youth living with HIV (AYLHIV) in reaching and maintaining treatment success and self-management. Many challenges stem from stigma and its vast reach at home, school, clinics, and among peers/partners. It is vital to find a way to productively discuss stigma and how to deal with it. The Committee of African Youth Advisors (CAYA), the internal youth engagement mechanism of the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF), developed a set of digital cartoons specifically for this purpose using the Avert Young Voices digital cartoon-creator platform.

**Methods:** Using the digital, youth-friendly Avert platform, CAYA teams (two young members 15-29 years old with an EGPAF staff member) from seven sub-Saharan African countries identified a sensitive topic or challenge AYLHIV face in their country and illustrated the topic using a four-scene cartoon story. These cartoons, accompanied by **Discussion** questions, were developed to allow AYLHIV in support groups to have guided, pertinent, and productive conversations about scenarios made for and by AYLHIV.

**Results:** The cartoons cover topics including misconceptions, stigma, discrimination in the context of disclosure at school and to peers or partners, acceptance of HIV status, and engagement with family. They are used in psychosocial support (PSS) groups with adolescents and youth (10-24 years) in nine countries (Cote d'Ivoire, Cameroon, Eswatini, Kenya, Lesotho, Malawi, Tanzania, Uganda, Zimbabwe). Cartoons specific to age and developmentally-responsive topics are used in age-disaggregated PSS groups—ALHIV 10-14 years old often use cartoons focusing on disclosure and acceptance of status. PSS participants provided positive feedback in using this youth-friendly resource, highlighting the engaging, attractive visual format and the cartoons' ability to "discuss real situations on the ground" as well as provide useful information that enables thinking through common challenges and productive group discussions.

**Conclusions:** Across different countries, digital, youth-created cartoons are an innovative, youth-friendly approach to discuss topics that are difficult to talk about for AYLHIV in PSS groups. Digital approaches can allow youth to develop responsive, age-friendly resources to address challenges and gaps they face in new, creative ways.

110

## Focal Service Provider (Fsp) Model For Improved Art Adherence And Retention Among Adolescent Key Populations Living With HIV In Cross River State, Nigeria.

Edet B<sup>1</sup>

<sup>1</sup>Heartland Alliance Ltd/gte, Calabar, Nigeria

**Background:** Adherence and Retention has been a major challenge in ART intervention among Adolescent Key Populations living with HIV, therefore the integration of Focal Service Provider Model (FSP) is a Reliable Differentiated care concept or strategy for rapid scale-up of antiretroviral therapy to improved adherence among people living with HIV, especially the Adolescent key populations who are HIV positive. The aim of this study is to ensure that the care is efficient and client centered. The model focuses on addressing the constraint of retention, poor adherence, accessibility of ARV and creates better relationship between the service provider and the clients.

**Description:** Focal service provider model is concept developed to reach out to Adolescent key population HIV positive clients who find it difficult to access ART services in a local community which may be due to community crisis, stigma, conflict or road network. This model strategy ensures that ART services reach to the grassroot persons living with HIV. Trained community health extension workers who are key population (Female sex workers, Men who have sex with men, Drug Users) and reside in that community are used as a focal service providers to provide ART services such as enrollment and placement of client on treatment, Refills and Viral Load sample collection to meet 95 95 95 goal.

**Lessons:** This model has been able to bridge the constraints of community conflict and crisis for client's accessibility of ART services, bring services closer to positive clients and improve differentiated care services. Clients who are not stable are easily monitored and refer for further services. The model is clients focus and it removed transportation burden from the clients. The model is cost effective, reduces decongestion in the OSS or facilities, promotes social support and drastically improves the client's adherence and retention in care. Finally the achievement of the 3rd 95 is achievable with this model.

**Conclusions:** This model can offer important benefits toward ART services to improve adherence and retention among key population living with HIV. Therefore, is recommended strategy for all ART implementing partners to adopt.

111

## Make Art Stop AIDS

*Kalima S<sup>1</sup>**<sup>1</sup>Art And Global Health Center Africa, Zomba , Malawi*

Although Malawi has made significant progress in its national response to HIV and AIDS, it continues to have one of the highest prevalence rates in the world (at around 10%). The National HIV and AIDS Strategic Plan 2015-2020 has identified male and female adolescents and youth as particularly vulnerable populations. In Malawi, especially in urban areas and in the Southern region, a significant proportion of youth are living with HIV (more young women than men). Further, many young people are sexually active before age 15 and many young women are getting married and bearing children before age 18. Yet comprehensive knowledge of HIV/AIDS, condom use, as well as knowledge and use of Youth Friendly Health Services (YFHS) remains significantly lower than needed to reach national targets.

MASA Youth aims to empower Malawian youth to take control of their sexual and reproductive health, contributing to reduced HIV incidence and higher quality of life. The specific project purpose is to improve sexual and reproductive health (SRH) knowledge, attitudes and practices among tertiary and secondary school students through near-peer, participatory, arts-based approaches.

The first phase of the project was to create MASA Squads in two colleges in Malawi. College students participating in Squads are trained to use participatory, arts-based approaches for SRH education. Each Squad then creates a performance dealing with SRH issues, including preventing and living with HIV. With an emphasis on peer education, MASA Squads perform on campuses, complemented by facilitated discussions and HIV testing and counseling (HTC).

In the second phase of the project, at 8 secondary schools in three districts of Malawi, MASA Squads runs a series of SRH workshops using the participatory, arts-based approaches they have learned. Each series includes a performance, and intensive workshops that encourage secondary school students to engage critically with issues of sexual health, share personal stories, and express themselves through the arts. Workshops culminate in MASA Festivals, in which secondary school students will perform and display their work to spark an open dialogue on SRH in their communities. Workshops are complemented by facilitated discussions, HTC, and the development of School Action Plans (SAPs) in which secondary school students collaborate with teachers, administrators, family members and caretakers to address issues raised during the discussions.

Secondary school teachers from participating schools are also trained in using participatory, arts-based approaches to SRH education, so that they can bolster the work of MASA Squads and provide support to youth living with HIV (YLHIVs).

112

## Assessment of the contribution of Mobile Health (mHealth) in re-shaping HIV/AIDS services in Tanzania: Review from Njombe Region

Nachenga F<sup>1</sup>, Kasongo M<sup>2</sup>, Bisimba J<sup>3</sup>

<sup>1</sup>Deloitte Consulting Limited, Dar es salaam, Tanzania, <sup>2</sup>FHI360, Dar es salaam, Tanzania, <sup>3</sup>USAID, Dar es salaam, Tanzania

**Introduction:** The application of mobile technologies, 'Mobile Health' (mHealth), in the health care industry is increasingly seen as a way to provide high quality and easily accessible care at lower costs. mHealth is the practice of medical and public health supported by mobile devices, such as mobile phones, patient monitoring devices, personal digital assistants (PDAs), and other wireless devices. Studies show that in places where basic access to healthcare is a challenge, mHealth can provide remarkable opportunities. Under the USAID Boresha Afya, the primary focus of the program is on reducing health care costs, delivering higher quality of care, and improving patient experience and access to basic health care.

**Methods:** SMS Reminder system is one among a number of digital health initiatives that the program supports the government to address missed appointment and lost to follow up among CTC clients and also aiming to improve HIV client adherence to treatment and retention in care. USAID Boresha Afya decided to conduct an analysis on the contribution of the system to retain HIV/AIDS patients to treatment in Njombe region. The system was introduced with the intention to; reduce missed appointments and reduce lost to follow-ups among clients.

**Results:** A total of 153,875 clients were expected to attend their visits and 126,220 clients attended their visits as scheduled at the respective facilities (38 Health Facilities) whereas 27,655 (18%) missed their appointment as scheduled for the period of July 2017 – March 2018. When comparing the same data in the past nine months (before the introduction of the SMS reminder systems), the expected clients were 27,398 and only 17,327 attended and a total of 10,071 (36% of the total appointments) missed their appointments.

**Conclusion:** Using the mHealth and the SMS Reminder System actively in this perspective is a good approach to reducing the LTF clients and a good way to motivate people living with HIV to go to health facilities for their scheduled visits and other services. This will enable the program and country to reach the 95-95-95 UNAIDS targets.



113

## A mixed Methods investigation into implementation barriers and facilitators of a daily mobile phone sexual risk assessment for young women in Soweto, South Africa

*Dietrich J<sup>1</sup>, Hornschuh S<sup>1</sup>, Khunwane M<sup>1</sup>, Makhale L<sup>1</sup>, Otwombe K<sup>1</sup>, Morgan C<sup>2</sup>, Huang Y<sup>2</sup>, Lemos M<sup>2</sup>, Lazarus E<sup>1</sup>, Kublin J<sup>2</sup>, Gray G<sup>1,3</sup>, Laher F<sup>1</sup>, Andrasik M<sup>2</sup>*

<sup>1</sup>Perinatal HIV Research Unit, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, Johannesburg, South Africa, <sup>2</sup>HIV Vaccine Trials Network, Fred Hutchinson Cancer Research Center, Seattle, United States of America, <sup>3</sup>South African Medical Research Council, Parow Valley, Cape Town, South Africa

**Background and Objectives:** Evaluation of HIV exposure is a challenge in HIV prevention research. Intermittent in-clinic interviewer-administered risk behaviour assessments are utilized, but may be limited by social desirability and recall biases. We piloted a mobile phone application for daily self-report of sexual risk behaviour in fifty 18-25 year old women at risk of HIV infection enrolled in HVTN 915 in Soweto, South Africa. Through a mixed-methods investigation, we determined perceptions, barriers and facilitators in completing daily mobile phone surveys among study participants and staff.

**Methods:** We analysed quantitative data collected during the study as well as two post-study focus group discussions (FGDs) with fifteen former participants and six individual in-depth interviews (IDIs) with HVTN 915 staff. FGDs and IDIs utilized semi-structured interview guides, were audio-recorded, transcribed verbatim and translated to English. After coding, thematic analysis was performed.

**Results:** The main facilitator for daily mobile phone survey completion assessed across 336 follow-up visits for 50 participants was the daily short message system (SMS) reminders (93%, 312/336). Across 336 visits 31/49 (63%) retained participants reported barriers to completion of daily mobile phone surveys: forgetting (20%, 12/59), being too busy (19%, 11/59) and the survey being an inconvenience (15%, 9/59). Five main themes were identified during FGDs with study participants and IDIs with HVTN 915 staff: (1) facilitators of mobile phone survey completion, such as daily SMS reminders and follow up calls for non-completers; (2) barriers to mobile phone survey completion, including partner, time-related and technical barriers; (3) power of incentives; (4) social desirability to complete the mobile phone and in-clinic questions, and (5) recommendations for future mobile phone based interventions.

**Conclusion:** Despite our enthusiasm to use innovation to optimise sexual risk assessments, technical and practical solutions are required to improve implementation. We recommend further engagement with participants to optimise this approach and to further understand social desirability bias and study incentives in sexual risk reporting.

114

## Communicating for Change using Social Media

Moore S<sup>1</sup>, Roff F<sup>1</sup>

<sup>1</sup>Avert, Brighton, United Kingdom

Avert developed a social media approach to help millions of young people take control of their sexual health:

1. Reaching young people in Southern Africa with information on HIV and sexual health: Access to social media is increasing dramatically in the region, especially Facebook and Instagram. Our social media campaigns reached young people in the places where they were already spending time, with information relevant to their lives.
2. Engaging young people in Southern Africa in discussion and debate about attitudes and behaviours related to HIV and sexual health: Our approach was to kick-start discussions and thinking, rather than simply providing facts. We developed the Young Voices campaign with a group of young people from Southern Africa, based on the dilemmas that they faced in their own lives. We developed strong characters and short animated stories that ended on a 'cliff-hanger', with a question to prompt discussion.

Our social media campaigns reached over 10.6 million people in the year 2019-20. Our most popular campaign was 'Young Voices', which has reached over 2.8 million people since launch in July 2018, with over 1.8 million engagements and 634,000 video views. Our wider social media campaigns also created high levels of engagement, with Southern African audiences engaging 1.3 million times in FY2019-20.

We developed our own measure of 'meaningful' social media engagement, using comment coding techniques as part of a pilot within Young Voices. 'Meaningful engagement' captures respondents who expressed through their social media comments that they had gained knowledge, changed their perspective, or related the issue back to their own experience. Based on this measure, we established that 59% of the comments left during the initial launch period were meaningful.

Social media can reach young people with vital information. User-led design reaches the right people with the right information. The relevance of Young Voices led to social media users engaging in debates with each other about the scenarios.

Our new approaches to market and measure the impact of social media creates evidence for other organisations about the potential of social media for change, and measurement techniques such as comment coding.

115

## Evaluation of the strategy accelerating the elimination of mother-to-child transmission (e-MTCT) of HIV by using a community-based tool "Pregnant women's tracking book" and sponsorship of seropositive pregnant women in Goudomp Health District (Sedhiou/Senegal).

KEITA I<sup>1</sup>, ANNE M<sup>2</sup>, DIAW C<sup>3</sup>, DIANDY S<sup>3</sup>, BASSENE I<sup>3</sup>

<sup>1</sup>Ministry Of Health And Social Action, Dakar, Senegal, <sup>2</sup>Podor Health District, Podor, Senegal, <sup>3</sup>Goudomp Health District, Goudomp, Senegal

**Background:** Border to Guinea Bissau, Goudomp Health District (GHD) is located in southern Senegal in the Sédhiou Region. It consisted of 14 Service Delivery Points (SDPs) covering 03 boroughs, 15 town halls, and 270 villages/neighborhoods. There is more than 550 staff, 90% of whom are represented by the community fabric. In 2016 GHD had 41,700 women of reproductive age, including 6,134 expected pregnancies. The HIV screening rate at the end of 2015 was 81% for pregnant women (PW) at antenatal consultations (ANCs) with a completion rate of 22%. This screening rate was 08.5% for new-borns from seropositive pregnant women (SPW). Thus the overall objective was to accelerate the elimination of mother-to-child transmission (e-MTCT) of HIV by using a community-based tool "Pregnant women's tracking book" and sponsorship of SPW in GHD by the end of 2016.

**Methods:** The strategy consisted in the creation of a community-based tool "Pregnant women's tracking book" available in all villages/neighborhoods, which is updated by a Community Leader in collaboration with the sponsoring midwife (SM). She is responsible for monitoring the mother-child relationship from conception to final serology in order to provide communities with equitable HIV testing and care services with a comprehensive package of care and follow-up for SPW and their children. Thus it was an observational study of an evaluative (analytical: before and after) and descriptive (retrospective cross-sectional) type of the contribution of the strategy in the area of responsibility of the GHD in 2016. Data were collected by a household survey from 429 women who gave birth between 01/09/2015 and 31/08/2016 in GHD with a multistage cluster survey. In addition, there is a document review using the national platform for routine data management: District Health Information System 2 (DHIS2). Data entry, analysis, and interpretation required Epi-Info, Excel and DHIS2 software. Finally, the results are presented in the form of tables, graphs, and images ; and the ethical considerations were effective.

**Results:** The community-based tool was available in each village/neighborhood of GHD, 93% of which were sponsored by the midwife sponsors of the SPW of these areas. Only the Binako Health Facility where the Head Nurse was the SPW's godmother. This strategy first boosted the use of ANC services from 71% (2015) to 89% (2016). It also increased from 8% (2015) to 49.5% (2016) upon completion of ANC. The strategy then improved from 81% to at least 87.5% the proportion of PW who were screened during ANC and received post-test counseling. The strategy has also improved the enrolment and monitoring of women and their children. Indeed, the proportion of infants born from SPW who received an early diagnosis by Dried Blood Spot during the first two months of life increased from 8% (2015) to 30% (2016). However, only 63% of SPW were on antiretroviral treatment (ART) in 2016 compared to 100% in 2015.

**Conclusion:** Experienced in 2016 by GHD, it was a success in HIV care, particularly in the prevention of vertical transmission, without forgetting its positive externalities on the use and completion of ANC services.

116

## Use of a safe space model to engage with Men who have sex with men (MSM) in clinical research in Cape Town, South Africa

Reynolds D<sup>1</sup>, Mfiki A<sup>1</sup>

<sup>1</sup>Desmond Tutu HIV Foundation, Cape Town, South Africa

**Background:** Men who have sex with men (MSM) have been historically marginalised within Southern African communities and face stigma and discrimination regardless of their HIV status. HIV prevalence among MSM in South Africa is high, estimated to be 26.8% in 2017.

Through clinical trials work at the Desmond Tutu HIV Foundation, staff and MSM individuals identified a need to create safe places for support and sharing common experiences within their communities. It was envisaged that these platforms would assist MSM individuals to feel safe when accessing HIV prevention and treatment, by creating a safe environment within their communities to open up about their sexuality.

**Methods:** Designated community liaison and counselling staff at the Desmond Tutu HIV Foundation (DTHF) developed relationships and networks with community leaders and stakeholders who regularly engage with the LGBTQIA+ community. DTHF contacted MSM in these communities to determine their needs and goals. Thereafter, DTHF staff identified and connected with community leaders within the MSM community during MSM awareness events, to request assistance in creating safe spaces. Community leaders then adopted the project and perpetuated it by arranging monthly meetings within their communities.

**Results:** Between 2014 and 2019, the DTHF helped to establish 11 safe spaces in the Cape Town metropolitan area in the Western Cape.

Within these safe spaces, members found solidarity and support in shared experiences, and united around common struggles. Discussions focused on the fears and barriers regarding the safety of the MSM community, when seen together in public. Planned outdoor activities created a sense of comradeship and empowerment. These spaces improved feelings of self-efficacy and resilience among MSM attendees and lessened the felt impact of external discrimination. The MSM population expressed desire for further empowerment and education.

Given their positive impact, leaders of the MSM community are actively looking to expand these safe spaces to reach more MSM individuals.

**Discussion:** Creating safe spaces for MSM empowers these communities, increases feelings of self-efficacy and resilience, and reduces self-stigma. These activities are essential for engaging communities that are at high-risk for HIV acquisition and may play a role in promoting HIV prevention and treatment.

117

## I engaged in unprotected sex with my partner and I am afraid of getting pregnant or contracting HIV; a helpline support system for adolescent and young people in Kenya.

Nzuki M<sup>1</sup>, Mbugua J<sup>1</sup>, Nawiri P<sup>1</sup>, Mwaura J<sup>1</sup>, Kimathi R<sup>1</sup>, Ikahu A<sup>1</sup>, Ondiek C<sup>1</sup>

<sup>1</sup>LVCT HEALTH, Nairobi, Kenya

**Background:** Adolescents having unprotected sex are at risk of HIV infection and unintended pregnancy. Adolescent pregnancy is a global problem occurring in high, middle and low income countries. At least ten million unintended pregnancies occur each year among adolescent girls aged 15-19 years. In Africa, adolescent pregnancy is cited as a major public health problem. In Kenya, 1 in every 5 girls between 15-19 years is either pregnant or already a mother. Every day, 48 Adolescents and young people (AYPs) get infected with HIV. AYPs experience challenges accessing correct HIV prevention and counseling information. Online support systems (helpline) have potential to improve uptake of HIV preventive measures and counselling among AYPs.

**Methods:** LVCT Health operates helpline (1190) which offers free targeted counselling and information dissemination to AYPs (15-24 years). The helpline has experienced psychologists who offer youth responsive services on HIV and sexual reproductive health (SRH). For instance, when an AYP calls and reports having had unprotected sex, a counselor receives the call, creates rapport and establishes their HIV status. The counselor normalizes the feeling of anxiety then establishes their eligibility for Pregnancy prevention prophylaxis and HIV Post Exposure Prophylaxis (PEP). The counselor then makes direct referral to the nearest health facility for further guidance. Follow-up calls are then made later to ensure the AYP took up the service referred for and continuous online counseling is maintained for as long as required.

**Results:** Routine online counselling data for the period of January 2019 to June 2020 was reviewed. Data was analyzed using MS Excel. Out of 3,193 calls on pregnancy and birth control, the females were 55% (1,749) while males 45% (1,444). Further analysis indicated that those who wanted specific guide on pregnancy and birth control were 31% (978), HIV testing and counselling were 4% (133), and HIV self-testing were 62% (1,967), PEP were 2% (57) and PREP were 2% (58) and the median age was 20 years.

**Conclusion:** The helpline is a useful platform to reach AYPs with HIV,SRH information and responding to stress related issues experienced by AYPs by identifying, providing counselling, and offering appropriate referral.

## Author Index

| Author         | Paper Title   | Abst.# | Page # |
|----------------|---|--------|--------|
| Achwoka,.D     | Comparative analysis of multi-month dispensing and viral load outcomes in the advent of COVID-19 among Adolescents living with HIV (ALHIV) in Kenya   | 68     | 69     |
| Akpan,.D       | Making COVID-19 a 'No Challenge' in sustaining HIV retention rate for Children and Adolescent Living with HIV in Akwa Ibom, Nigeria   | 65     | 66     |
| Akpan,.U       | Operation Triple Zero, a tool for epidemic control: The Akwa Ibom State experience  | 66     | 67     |
| AMAIZA,.C      | How Adolescents and Young People Living with HIV successfully tackled the issuing of expired Anti-Retroviral Treatment using Social Media #ourlivesmatter                                       | 7      | 9      |
| Asamoah,.A     | Knowledge and utilization of Sexual and Reproductive Health Services  | 24     | 26     |
| Awori,.R       | Getting To What Works: Are Current HIV Prevention Strategies Effective in Addressing Young People's Realities?  | 36     | 38     |
| Badejo,.O      | Multi-level modeling and multiple group analysis of disparities in continuity of care and viral suppression among Nigerian adolescents and youths living with HIV                               | 63     | 64     |
| Banda,.T       | Exploring Family Planning methods accessibility and preference among adolescents in Zambia  | 37     | 39     |
| Banda,.T       | Assessing mental health challenges among Adolescents living with HIV in Zambia  | 103    | 103    |
| Buh,.A         | Clients' satisfaction with HIV treatment services in Bamenda, Cameroon: a cross-sectional study   | 90     | 90     |
| Carter,.A      | 'It's like a new life that you never knew about until now': The CHIVA UK Youth Committee of YPLHIV: How it works and what it achieves.  | 56     | 57     |
| Chaila,.M      | A primary care level algorithm increases yield of HIV positive adolescents in a community intervention: HPTN071 (PopART) Study, Zambia  | 4      | 6      |
| Chawana,.T     | Tenofovir concentrations in hair are associated with virological decrease in HIV-infected adolescents with second line virological treatment failure  | 71     | 72     |
| Chen,.J        | What do adolescents affected by HIV value most? Aspirations and self-perceptions from a large cohort study in South Africa.   | 94     | 94     |
| Chimbindi,.N   | Delivery of school-based interventions to promoting adolescent health and well-being: Lessons from a multilevel HIV-prevention intervention through DREAMS in rural KwaZulu-Natal, South Africa | 30     | 32     |
| Chory,.A       | Examining the Impact of COVID-19 on Adolescents Living with HIV in New York City  | 86     | 86     |
| Chukwudozie,.A | Using U-Report to Assess Awareness Levels and Protective Behaviour Towards Covid-19 Among Adolescents and Young People in Botswana  | 52     | 53     |
| Chukwudozie,.A | Adopting Innovative Youth-led Social Behavioral Communication Change Interventions to Promote HIV Prevention amongst Adolescent and Young People in Botswana                                    | 108    | 107    |
| Dada,.T        | LESSON LEARNED DURING THE COVID-19 LOCKDOWN IN A YOUTH PROGRAMME AT A RESEARCH CLINIC IN MBEKWENI: ADDRESSING SOCIETAL AND COMMUNITY NORMS IMPACTING YOUTH'S WELL-BEING.                        | 53     | 54     |
| Desai,.N       | Optimizing disclosure of HIV status to a diverse population of children at an urban Pediatric HIV Clinic in the Southeastern United States  | 43     | 45     |
| Desai,.N       | Retention in Care Among Perinatally Infected Youth Living in But Born Outside the United States: Implications for Local Epidemic Control  | 46     | 47     |
| Edet,.B        | FOCAL SERVICE PROVIDER (FSP) MODEL FOR IMPROVED ART ADHERENCE AND RETENTION AMONG ADOLESCENT KEY POPULATIONS LIVING WITH HIV IN CROSS RIVER STATE, NIGERIA.                                     | 110    | 109    |
| Ejeckam,.C     | Increasing HIV linkage To Care and Retention Among PLHIV through Community Centered Approach: Lessons Learnt During COVID-19 in FCT & Implication for Adolescent Health Programming in Nigeria. | 104    | 104    |
| Ekwunife,.O    | Impact of conditional economic incentives and motivational interviewing on health outcomes of HIV adolescents in Anambra State, Nigeria: a cluster-randomized trial                             | 23     | 24     |
| Ekwunife,.O    | Cost-effectiveness and Feasibility of Conditional Economic Incentives and Motivational Interviewing to Improve HIV Health Outcomes of Adolescents Living with HIV in Anambra State, Nigeria     | 107    | 106    |
| Farirai,.J     | RATES OF VIROLOGICAL FAILURE/SUPPRESSION AMONGST ADOLESCENTS ON LIFELONG ART AT BOTSWANA-BAYLOR   | 102    | 102    |
| Ferguson,.J    | How is the vulnerability and risk of AGYW to HIV, STI and unintended pregnancy being assessed in East and Southern Africa.  | 31     | 33     |
| Hanif,.F       | Street/Interactive Theatre to Promote quality HIV/AIDS Prevention education and Sexual Reproductive Health Awareness  | 54     | 55     |
| Hatwiinda,.S   | Systems Strengthening to increase capacity in Institutions of Rehabilitation to test and treat HIV and co-morbidities among Juveniles in conflict with the law.                                 | 41     | 43     |
| Houston,.A     | Case histories of the early paediatric combination Antiretroviral Therapy (cART) experience at Tygerberg Children's Hospital – the HOPE Cohort.   | 89     | 89     |
| Itindi,.J      | Transition experience from adolescent to adult HIV care among adolescents and young adults  | 87     | 87     |
| Itzikowitz,.G  | Capacity building to enhance adolescents in research.   | 20     | 21     |
| Kalima,.S      | Make Art Stop AIDS  | 111    | 110    |
| Kalu,.S        | Treatment Outcomes Among Children and Adolescents Living with Human Immunodeficiency Virus (LHIV) in Southeastern Nigeria   | 58     | 59     |
| Kamkuemah,.M   | Mental Health and Substance Use in Adolescents and Youth Living with HIV in a context of Violence.  | 16     | 18     |

| Author             | Paper Title   | Abst.# | Page # |
|--------------------|---|--------|--------|
| Kamkuemah,.M       | Epidemiology of Non-communicable Diseases and Risk factors in South African Adolescents and Youth Living with HIV in an urban setting.  | 74     | 75     |
| Keal,.J            | The changing face of paediatric HIV: A review of the evolving clinical characteristics of a paediatric and adolescent patients at a clinic in Johannesburg, South Africa.   | 78     | 78     |
| KEITA,.I           | Evaluation of a health improvement strategy by creating a Mobile HIV Care Team (MHIVCT) in collaboration with Community Actors (excluding mediators) in the Goudomp Health District (Sedhiou/Senegal).  | 21     | 22     |
| KEITA,.I           | Evaluation of the strategy accelerating the elimination of mother-to-child transmission (e-MTCT) of HIV by using a community-based tool "Pregnant women's tracking book" and sponsorship of seropositive pregnant women in Goudomp Health District (Sedhiou/Senegal). | 115    | 114    |
| Kutywayo,.A        | Adolescent experiences of and recommendations for healthcare services in the GAP Year Trial, Gauteng, South Africa  | 49     | 50     |
| Lawal,.I           | Strengthening Adolescent-Friendly Service Package in Nigerian Military Health Facilities to Improve HIV Viral Load Suppression  | 98     | 98     |
| Lee,.D             | Adolescent girl-led participatory action research: early lessons from a sport-based cluster randomised trial in Cape Town, South Africa   | 18     | 20     |
| Lee,.D             | Building a strong team for girls: qualitative findings on the acceptability and feasibility of a sexual and reproductive health intervention for adolescents in Cape Town, South Africa   | 28     | 30     |
| Lee,.D             | Tackling a new opponent: Rapid assessment of a sport-based COVID-19 prevention curriculum   | 55     | 56     |
| Lee,.D             | Better, cheaper, more effective: Using a Rapid Cycle Improvement model to improve implementation and outcomes on sport-based VMMC demand creation in Zimbabwe   | 59     | 60     |
| Lenz,.C            | Adolescent and Youth Engagement and Partnership in the Development of a Global Adolescent and Youth Living with HIV Transition of Care Toolkit  | 51     | 52     |
| Lenz,.C            | The Provision of School-based Support for Adolescents and Youth Living with HIV in Boarding Schools in Homa Bay and Turkana, Kenya: The Red Carpet Program  | 70     | 71     |
| Lenz,.C            | Status of Adolescent and Youth Services in Blantyre, Malawi: A Baseline Assessment of Adolescent and Youth Health-Friendly Services (AYFHS) in Four Selected Sites for the Red Carpet Program Implementation  | 80     | 80     |
| Lenz,.C            | The Use and Development of Youth-created Digital Cartoons to Address Stigma, Discrimination, and Shame Faced by Adolescents and Youth Living with HIV   | 109    | 108    |
| Logie,.C           | Contextual considerations to guide HIV prevention cascade optimization for urban refugee and displaced adolescents and youth in Kampala, Uganda   | 3      | 5      |
| Logie,.C           | Intersectional stigma and HIV testing practices and preferences among urban refugee and displaced adolescents and youth in Kampala, Uganda  | 45     | 46     |
| Mackworth-Young,.C | 'Us young people really depend on it': Adapting a youth-centred community-based HIV intervention in Zimbabwe in the context of COVID-19   | 27     | 29     |
| Madukani,.H        | RISK ASSESSMENT TOOL: A NEW WAY OF ENHANCING ART ADHERENCE AMONG ADOLESCENTS LIVING WITH HIV  | 84     | 84     |
| Mafaune,.H         | HIV vulnerability among Adolescent Girls and Young Women (AGYW) enrolled for DREAMS program in Zimbabwe   | 105    | 105    |
| Mafulu,.Y          | Innovative management of chronic poor adherence and ART failure in patients on Protease Inhibitors-based regimen  | 64     | 65     |
| Mahuma,.T          | Perceptions and experiences of puberty among participants of the Girls Achieve Power (GAP) Year cluster randomised control trial programme in three townships, South Africa: Qualitative findings   | 35     | 37     |
| Makoni,.K          | Socio-demographic characteristics and prior sexual experiences with telling influences on willingness to take HIV tests: A case study of adolescents and young people in a border-lying rural community   | 50     | 51     |
| Marimirofa,.M      | KNOWLEDGE, ATTITUDES AND PRACTICES OF CONTRACEPTIVE USE AMONG STUDENTS IN SELECTED UNIVERSITIES IN ZIMBABWE: 2019   | 1      | 3      |
| Mark,.D            | Health provider views on psychosocial interventions for adolescents living with HIV: A multi-country perspective  | 91     | 91     |
| Mbele,.W           | Knowledge and attitude towards acceptability of male circumcision for HIV prevention among male students at the University of Zambia, Ridgeway Campus.  | 62     | 63     |
| Micheal,.S         | Young people bridging the leadership gap.   | 57     | 58     |
| Milanzi,.A         | Sexual and reproductive health issues of Adolescents Living with HIV in Zimbabwe  | 34     | 36     |
| Moore,.S           | Communicating for Change using Social Media   | 114    | 113    |
| Mucho,.M           | Predictors of worsening viral load within the first-two years of ART initiation for children and adolescents  | 85     | 85     |
| Mudzengerere,.F    | PrEP uptake among AGYW enrolled under the DREAMS programme in Zimbabwe  | 10     | 12     |
| Mudzengerere,.F    | Effectiveness of the Early Warning System to curb school dropouts in schools  | 26     | 28     |
| Mudzengerere,.F    | Building resilience of adolescent girls through economic strengthening activities, a focus on savings and lending schemes   | 79     | 79     |
| Mugo,.C            | Adolescent perspectives on HIV status disclosure to older children and adolescents  | 42     | 44     |
| Mukwekwerere,.P    | ASSESSING THE SOCIAL AND PSYCHOLOGICAL IMPACT OF COVID-19 AND THE LOCKDOWN ON YOUNG PEOPLE (18-25yrs) IN HARARE, BULAWAYO AND MUTARE- AN ONLINE SURVEY  | 101    | 101    |
| Mulaudzi,.M        | Developing a chatbot for HIV risk assessment among young people living in Soweto, South Africa  | 22     | 23     |

| Author         | Paper Title  | Abst.# | Page # |
|----------------|--|--------|--------|
| Nabatte,.V     | Predictors of viral non suppression among adolescents attending care at Mildmay Uganda Hospital  | 88     | 88     |
| Nachenga,.F    | Assessment of the contribution of Mobile Health (mHealth) in re-shaping HIV/AIDS services in Tanzania: Review from Njombe Region   | 112    | 111    |
| Nalugo,.S      | The psychological impact of COVID-19 on pregnant adolescents and young mothers.  | 17     | 19     |
| Ndep,.A        | Modalities for achieving UNAIDS 95-95-95 targets among children, adolescents and young adults living with HIV in Cross River State, Nigeria using the differentiated model of care.  | 83     | 83     |
| Nengomasha,.N  |  | 29     | 31     |
| Njume,.D       | Intervention and Service Delivery approach (from the community to facility).<br>Virological failure is consistent with acquired HIV drug resistance among vertically-infected adolescents: evidence from the EDCTP-READY study | 13     | 15     |
| Nsubuga,.S     | When and how do individuals transition from regular drug use to injection drug use in Uganda? Findings from a rapid assessment   | 96     | 96     |
| Nsubuga,.S     | HIV- and hepatitis C-related risk behaviors among people who inject drugs in Uganda: implications for policy and programming   | 100    | 100    |
| Nyamathe,.S    | RISK OF HIV INFECTION IN YOUNG PERIPARTUM WOMEN (15 – 24 YEARS) AT TYGERBERG HOSPITAL  | 2      | 4      |
| Nzuki,.M       | I engaged in unprotected sex with my partner and I am afraid of getting pregnant or contracting HIV; a helpline support system for adolescent and young people in Kenya.   | 117    | 116    |
| Ochieng,.A     | Improving the life chances and quality of life of vulnerable Adolescents through HIV-Sensitive Social Protection in Kisumu County, Kenya The Case of Cash Plus Care Interventions supported by UNICEF                          | 25     | 27     |
| Odira,.V       | Overarching topic: Youth led initiatives<br>Using treatment as prevention to curb the burden of new HIV infection among young men who have sex with men in Mombasa County  | 60     | 61     |
| Onwe,.E        | Uptake and experience of HIV and Hepatitis C Virus testing among adolescents and young people who use drugs in Nigeria   | 6      | 8      |
| Onwe,.E        | Evaluation of the knowledge and use of HIV self testing among adolescents and young people in Nigeria  | 48     | 49     |
| Onwe,.E        | Challenges adolescents and young people living with HIV face in adhering to ART: The Nigerian Experience   | 82     | 82     |
| Otieno,.B      | A Battle of the Mind to Adherence: Lessons Learnt From Kenyan AYPs   | 93     | 93     |
| PANGUI         | The application of the “Differentiated Approach” to HIV/Covid-19 prevention among adolescents as an efficient response strategy: The case of HORIZON JEUNE in Cameroon.  | 32     | 34     |
| MEFENYA,.P     | Barriers to integrating HIV-SRHR and adolescent friendly health services   | 33     | 35     |
| Phillips,.L    |  | 47     | 48     |
| Pierotti,.C    | Are adolescents and young people still vulnerable to HIV? Findings from a secondary analysis of key HIV indicators in Zimbabwe   | 11     | 13     |
| Rashidi,.W     | High HIV prevalence amongst adolescent boys who have sex with other men in Delta State, Nigeria.   | 116    | 115    |
| Reynolds,.D    | Use of a safe space model to engage with Men who have sex with men (MSM) in clinical research in Cape Town, South Africa   | 5      | 7      |
| Saal,.W        | The association between HIV-status disclosure and stigma experiences among adolescents living with HIV in South Africa   | 8      | 10     |
| Sabur,.B       | Youth in an Intersectional Advocacy Effort against The Indonesian Penal Code Revision that Violates Sexual and Reproductive Rights   | 12     | 14     |
| Sellberg,.A    | Using a quality improvement process to improve viral load testing coverage among children, adolescent and young people living with HIV   | 73     | 74     |
| Sellberg,.A    | Feasibility of peer led active TB case finding, mobilisation for IPT and adherence support among Adolescents and Young People living with HIV in Zimbabwe  | 61     | 62     |
| Sullivan,.K    | Advancing Responsible HIV/Co-infections Research with Pregnant Adolescents: Perspectives of Southern African Stakeholders  | 40     | 42     |
| Tapiwa,.L      | Limitations and dilemmas of information dissemination on sexual and reproductive health and rights in sub-Saharan Africa.  | 75     | 76     |
| Tassemedo,.S   | Prevalence of HIV among adolescent girls involved in Sex Work in Burkina Faso  | 39     | 41     |
| Thornicroft,.M | Identifying Barriers To Accessing Health Services: Detention Period For Juvenile Offenders In Adult Correctional Facilities Zambia   | 67     | 68     |
| Togna Pabo,.W  | In Rural Cameroon, Half of Adolescents are Experiencing Virological Failure With HIV Drug Resistance   | 9      | 11     |
| Toska,.E       | Acceptability of long-acting injectable antiretroviral therapy among AYLHIV in South Africa: the missing link for reaching the 3rd 90?   | 69     | 70     |
| Van Dongen,.N  | Exploring the relationship between age and HIV viral load in an adolescent cohort over a 10-year period.   | 113    | 112    |
| Vermaak,.S     | A mixed methods investigation into implementation barriers and facilitators of a daily mobile phone sexual risk assessment for young women in Soweto, South Africa   | 92     | 92     |
| Vreeman,.R     | Qualitative Analysis of a mobile WhatsApp group messaging intervention for adolescents living with HIV in Kenya  | 97     | 97     |
| Vreeman,.R     | Perspectives of education sector stakeholders on a HIV teacher training module to reduce HIV/AIDS stigma in Western Kenya  |        |        |



| Author     | Paper Title   | Abst.# | Page # |
|------------|---|--------|--------|
| Wallace,.M | Reducing mother to child transmission among adolescent girls and young women (AGYW) in low-income and middle-income countries.  | 14     | 16     |
| Wallace,.M | Viral load uptake and suppression among pregnant and breastfeeding adolescent girls and young women (AGYW)  | 81     | 81     |
| Wallace,.M | Building parenting programmes into adolescent HIV care  | 99     | 99     |
| Willis,.N  | Effect of a peer-led mental health intervention on virological suppression and mental health among adolescents living with HIV in Zimbabwe (Zvandiri-Friendship Bench): a cluster-randomised controlled trial | 15     | 17     |
| Zerbe,.A   | "They will not like me" - The secret life of young adolescents living with HIV in northern Mozambique   | 72     | 73     |
| Zerbe,.A   | Experiences of caregivers of young adolescents living with HIV in Mozambique – a mixed methods approach   | 76     | 77     |
| Zerbe,.A   | Sexual violence and violence within relationships among adolescents living with HIV in Mozambique   | 95     | 95     |
| Zimunya,.T | Understanding barriers to uptake of teaching Sexual health education in Zimbabwean and rural Secondary schools. A case of Holy Family Secondary School, Buhera District.                                      | 38     | 40     |