Oral Abstracts

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1013 Are HIV ART Adherence and Retention Rates Affected by Extreme Weather Events? Capacity Building for a Climate-Resilient Healthcare System

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Background: A novel approach to understand the influence of extreme weather events (EWE) on healthcare access (HA) in a population living with HIV (PLWH) demonstrated an increase of up to 13% no-show rate during these events in Miami, Florida. As a coastal city, it is exposed to EWE at increased frequency and intensity. Indirect effects of EWE disrupt comprehensive HA, affecting ART adherence and HIV-treatment retention rates.

Method: This study was conducted at the largest academic medical center for South Florida, including a sample of ~87,000 clinic visits retrospectively modelled against EWE. Thirty years of hourly weather data were extracted for Miami, Florida, from the NOAA, and percentiles extrapolated. EWE were defined as >90th percentile of heat or precipitation. Time series regression analysis was used to link the clinic visits (2015-2019) with percentiles. A survey was distributed to PLWH receiving clinical care and aimed to understand their knowledge, attitudes, and behaviors regarding climate and health, and EWE. These clinics include PLWH who are MSM, pregnant women, homeless, and other marginalized individuals in Miami.

Results: There were nearly 10 months with extreme heat and 3 months with extreme precipitation inconsecutively within the five-year study-period. A 6% reduction in attendance on days with extreme heat (p=.0001), and 3% reduction on days with extreme precipitation (p=.1855) was seen. When asked what PLWH would do if they had a scheduled clinic visit but would be faced with EWE, they were nearly 4x more likely to not attend due to high temperature (p=0.0122) or heavy rain (p=0.0058).

Conclusion: As EWE become more prevalent, it is important to develop capacity building within existing healthcare systems and community planning. Climate's (in)direct influence on health and healthcare access should be integrated in the conversation to build resilient systems offering comprehensive care, ART adherence and increase treatment retention.

1016 Gender-Based Violence and Post-Traumatic Stress Disorder Symptoms Predict HIV Pre-Exposure Prophylaxis (PrEP) Uptake and Persistence Failure among Transgender and Non-Binary Persons Participating in PrEP Demonstration Project

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Background: Gender-based violence (GBV) against transgender and nonbinary (TGNB) persons is a pervasive public health issue. GBV has been linked to mental health problems such as depression and posttraumatic stress disorder (PTSD), as well has risk for HIV seroconversion and HIV treatment nonadherence. However, the impact of GBV on persons who use HIV pre-exposure prophylaxis (PrEP) has yet to be investigated.

Method: Measures of GBV and PTSD symptoms were collected along with longitudinal PrEP persistence data from dried blood spots (DBS) from 172 TGNB participants in a PrEP demonstration project across 48 weeks. Participants were categorized into three levels of PrEP uptake and persistence based on their PrEP levels at the start and end of the study: *low-low, high-low, and high-high.* Individual-, social-, and structural-level variables were then entered into multinomial logistic regression models to predict levels of PrEP uptake and persistence based on theoretically informed hypotheses.

Results: The models demonstrated that experience of GBV predicted significantly greater odds of having low-low vs. high-high PrEP levels (beta=2.46, $p<.05$; OR=11.69, 95% CI=(1.57, 87.08) and having greater PTSD symptoms predicted significantly greater odds of having high-low vs. high-high PrEP levels (beta=0.76, $p<.05$; OR=2.13, 95% CI=1.17, 3.89). Having higher levels of coping skills, already being on PrEP at baseline, and being in a steady relationship were also associated with significantly greater odds of being high-high vs. low-low.

Conclusion: Implications for future GBV research, advocacy, prevention, and needed structural changes focused on improving the health and safety of TGNB individuals are discussed.

1018 Understanding Disparities in Antiretroviral Therapy Adherence and Sustained Viral Suppression among Black, Hispanic/Latino, and White Men who have Sex with Men in the United States

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Background: In the United States, men who have sex with men (MSM) and racial/ethnic minorities are disproportionately affected by HIV. We examined factors that may explain racial/ethnic disparities in antiretroviral therapy (ART) adherence and sustained viral suppression (SVS) among MSM.

Method: The Medical Monitoring Project collects interview and medical record data from a probability sample of U.S. adults with diagnosed HIV. Using weighted data from the 2015-2019 cycles, we calculated prevalence differences (PDs) with 95% confidence intervals (CIs) of ART adherence (100% ART adherence in the past 30 days) and SVS (all viral loads in past 12 months <200 copies/mL or undetectable) for Black MSM (BMSM) and Hispanic/Latino MSM (HMSM) compared with White MSM (WMSM). Using forward stepwise selection, we then calculated adjusted PDs with 95% CIs to examine if controlling for selected variables, including social determinants of health (SDOH) factors, reduced PDs.

Results: After adjusting for age, any unmet service need, food insecurity, poverty, education, homelessness, and gap in health coverage, the PD for ART adherence among BMSM compared with WMSM reduced from -16.5 to -9.7 (-41%). For SVS among BMSM compared with WMSM, the PD reduced from -13.5 to -5.9 (-56%) after adjusting for ART adherence, age, gap in health coverage, HIV care engagement, poverty, food insecurity, any unmet service need, homelessness, and education. Among HMSM compared with WMSM, the PD for ART adherence reduced from -10.2 to -4.5 (-56%) after adjusting for age, any unmet service need, and binge drinking. The unadjusted PD for SVS among HMSM compared with WMSM was not statistically significant.

Conclusion: Despite adjusting for age, HIV care engagement, and SDOH factors, racial/ethnic disparities in ART adherence and racial disparities in SVS remained, although the magnitude of such differences was greatly reduced. Addressing these factors, particularly among BMSM, would substantially improve health equity among MSM with HIV.

1024 Reasons for Late Antiretroviral Refill and Impact of Pharmacist Counseling on Antiretroviral Adherence: A Study Following the Early Warning Indicators of World Health Organization Recommendations

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Background: Recent studies have reported on-time anti-retroviral (ART) drug pick-up, the fourth Early Warning Indicator (EWI) described by World Health Organization (WHO) to be the strongest predictor of clinic-level viral load suppression. The primary objective of this study was to assess the impact of pharmacist counseling at the point of late ART refill and identify modifiable predictors for refill non-adherence.

Method: A cross sectional study was conducted among 691 Malaysian HIV-infected individuals receiving ART from May 2019 until July 2019. Patients with late refills were actively absorbed for a comprehensive counseling session and follow-up pharmacy refills were evaluated using medication possession ratio (MPR). Paired T-test was used to test the effectiveness of counseling at late refills whilst multivariate regression models were used to examine predictors of late refills.

Results: Of 691 HIV-infected patients, 85% had on-time refills. Patients with late refills (n= 100) were predominantly male (88%) with a mean age was 40 years. Mean duration on ART was 4 years. Work commitment accounted for the highest reasons for late refills (25.7%. Identifying patients and providing counseling at late refills increased refill adherence significantly in patients who had previously poor refill scores (MD=14.43; SD= 13.14; p <0.001). Multivariate binary logistic regression analysis found history of self-reported non-adherence (AOR= 0.259; 95% CI [0.119 -0.563]; P<0.001), traveling more than 20km to the hospital (AOR= 0.184; 95% CI [0.079-0.427]; p< 0.001) and having medication possession ratio percentage of less than 90 % (AOR= 0.141; 95% CI [0.067-0.296]; p<0.001) were significant predictors of late refill.

Conclusion: Our study recommends integration of identifying and counseling patients with late refills as part of the dispensing process as it increases pharmacy refill adherence significantly. This targeted intervention could serve as an early proxy of retention in care especially in resource-limited settings

1026 Facilitators and Barriers to the Delivery of Dispensing Messages to Caregivers of Children Living with HIV at Four HIV Care Centers in Kampala: A Qualitative Study.

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Introduction: In Uganda, despite optimization of children to more efficacious regimens like Lopinavir/ritonavir (LPV/r) pellets and Dolutegravir (DTG), viral suppression rates among children remain low, at 77%, way below the UNAIDS target of 95%. Uptake and administration of LPV/r pellets is hindered by low literacy levels among caregivers regarding how to administer the pellets. We explored facilitators and barriers to delivery of dispensing messages to caregivers at four HIV care centers in Kampala, Uganda.

Description: We conducted a qualitative study at four HIV clinics in Kampala. Data were collected through 7 FGDs of 6-9 participants each and 12 key informant interviews with health care workers involved in care for children between 19th October–2nd November 2021. Data was analyzed using content thematic approach informed by the Capability, Opportunity, and Motivation Model of Behavior (COM-B model).

Lesson Learned: Availability of skilled and knowledgeable health workers, visual messages, drug demonstrations on administration, use of toll-free telephone, and short message service reminders were noted as facilitators. Barriers included; shared counselling and clinical rooms that impede confidentiality, dispensing messages not provided routinely but targeting those initiating or not adhering to ARVs, negative attitude of some health workers, heavy client load limiting time spent with caregivers to offer dispensing messages, lack of mentorship on dispensing messages, negative beliefs, inadequate audio-visual messages on drug administration and effects of none adherence, and COVID-19 pandemic related restrictions.

Recommendations: There are major barriers to delivery of dispensing messages to caregivers of children living with HIV. Initiatives to improve dispensing messages should build on existence of skilled and experienced health care workers at all study HIV clinics and a network of expert clients who draw on their own experiences taking ARVs to educate others. Advocacy to address broader health system challenges such as space and health workforce constraints will be critical as well.

1029 Prognostic Factors Influencing Survival among Infants Enrolled for Early Infant Diagnosis (EID) Services in Women of Low Socio-Economic Backgrounds in Nairobi, Kenya

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Background: Globally, the mother-to-child transmission rate of HIV is 9% with sub-Saharan Africa accounting for 90% of these infections. In Kenya, the national MTCT rates stood at 11.5% in 2018, with a target to reduce these to below 5% by the end of 2021. Our study explored prognostic factors influencing survival among infants enrolled for EID services among women of low socio-economic backgrounds in Nairobi, Kenya.

Method: A prospective cohort study design was adopted. 166 infants born to HIV-positive mothers were enrolled 2 weeks post-delivery and followed up for one year between Sept 2018 and Sept 2019. Kaplan-Meier, Log-rank test, and Cox-proportional regression assessed survival functions. Multivariable modeling was carried out through a forward elimination strategy using the likelihood ratio test and Bayesian Inclusion Criterion. The models were assessed for overall fit using Pearson's goodness-of-fit test.

Results: Infant HIV incidence rate over one-year follow-up was 9 cases per 100 person-years (95% CI: 5.4, 16.2). Failure event was defined as infant HIV positive status with total failures being 13 (9.4%) over 12 months. Prognostic factors associated with poor infant survival included young maternal age (18-24 years) and mothers with a recent HIV diagnosis of ≤2 years enrollment to Comprehensive Care Clinic (HR 5.9 95%CI: 1.20, 29.5) and (HR 6.97 95%CI: 1.96, 24.7), respectively.

Conclusion: Maternal prognostic factors associated with poor infant survival over one-year follow-up period were young maternal age and recent maternal HIV diagnosis. There is a need to develop an intervention package for young mothers and mothers with recent HIV diagnoses with more rigorous adherence and nutritional counseling and close monitoring of these mother-infant pairs.

1033 High Incidence of COVID-19 Infection and Related Stigma among a Cohort of PWH in Washington, DC, USA

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Background: Few studies have investigated the impact of HIV/COVID-19 co-infection on PWH's socioeconomic status and the overlap of co-infection and stigma. We sought to measure the incidence of COVID-19 infection among a cohort of PWH, characterize associated risk factors, and document perceptions of COVID-19-related stigma.

Method: Data for this cross-sectional study come from the COVID-19 survey of DC Cohort longitudinal study participants (10/30/2020-present). Survey results, including COVID-19-related stigma, were linked to electronic health records. We conducted bivariate analyses comparing demographic, socioeconomic, HIV measures, and COVID-19 impact among those with and without self-reported COVID-19.

Results: Among 869 respondents, incidence of self-reported COVID-19 infection was 11%; 40% confirmed through primary HIV site laboratory data. The most reported symptoms were loss of taste (56%) and smell (53%). Ten percent required hospitalization for COVID-19. Among PWH with COVID-19, 77% were non-Hispanic Black and 58% essential workers. Clinically, 89% were on ART, 56% had suppressed viral load, and 69% had a CD4 count greater than 200 cells/μL. The only significant difference by COVID-19 infection status was observed for history of asthma (9% with COVID-19 vs. 19% without, p=0.0182). During the pandemic, 6% lost health insurance and 5% lost housing. Among co-infected respondents, 31% reported difficulty telling people about their COVID-19 diagnosis, 26% felt it made them feel dirty, 26% felt guilty, 26% felt ashamed of their COVID-19 diagnosis, and 18% hid the diagnosis.

Conclusion: A high incidence of COVID-19 infection was observed among an urban cohort of PWH. While few differences were observed among PWH with COVID-19 compared to those without co-infection, many co-infected respondents experienced COVID-19-associated stigma. Results highlight the need for continued research on stigma and the socioeconomic impact of COVID-19 on PWH.

1036 Hazardous Drinking, Readiness to Change, and Alcohol-Related Self-Efficacy among People with HIV Receiving HIV Care in Kinshasa, the Democratic Republic of Congo

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Background: Hazardous drinking is common among people with HIV (PWH) in sub-Saharan Africa (SSA) and associated with suboptimal ART adherence. Integration of alcohol reduction interventions into HIV care in SSA is urgently needed. Understanding readiness to change and alcohol-related self-efficacy can facilitate identification of appropriate alcohol reduction interventions for PWH and may increase intervention adoption and effectiveness and improve ART adherence.

Method: We surveyed 203 PWH receiving HIV care in Kinshasa, the Democratic Republic of Congo in 2021. Hazardous drinking (Alcohol Use Disorder Identification Test score ≥8 for men; ≥7 for women), readiness to change (Readiness to Change Questionnaire for alcohol use), and alcohol-related self-efficacy (Alcohol Abstinence Self-Efficacy Scale) were assessed. Individuals were categorized into 3 readiness groups (precontemplation, contemplation, action) based on the Transtheoretical Model.

Results: Most (67%) participants were female. Almost all participants (98%) had initiated ART, but 32% reported having missed ≥1 ART dose in the past week. Overall, 25% of participants reported binge drinking, and 17% reported hazardous drinking. Among PWH who reported hazardous drinking, 59% reported some readiness to change (22% contemplation, 37% action). Among those who reported hazardous drinking, individuals were most likely to report being tempted to drink when around others who were drinking (75%) and when emotionally upset (72%). Among those who reported hazardous drinking, only 38% of individuals were confident in their ability to resist drinking when concerned about offending someone.

Conclusion: Hazardous drinking and suboptimal ART adherence were commonly reported among this group of PWH receiving HIV care in Kinshasa. Most individuals who reported hazardous drinking endorsed readiness to change. Alcohol reduction interventions that consider the social and emotional context of drinking would likely be most appropriate. Intervention components should be enhanced to build self-efficacy to cope with social pressure to drink and reduce drinking to cope with emotional distress.

1043 Screening with Patient-Reported Outcomes (PRO) Assessments to Identify Risk Factors for Suboptimal Adherence in Routine HIV Care

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Background: Screening with PRO assessments to identify patient needs and behaviors before a clinic visit has shown high patient and provider acceptability. We examined the association between PROs and suboptimal antiretroviral therapy adherence among people with HIV (PWH) at two North American clinics.

Method: Participants self-administered a tablet-based PRO assessment on-site before a routine care visit. Unadjusted and adjusted odds ratios were estimated from logistic regression models to identify factors associated with suboptimal adherence (self-reporting <95% or <80%). Variables yielding *P* values <0.15 in unadjusted analyses were included in multivariate analyses. Satisfaction with ART was assessed through endorsement of two HATQOL items: "In the past 4 weeks, taking my [HIV] medicine has" 1) "been a burden" or 2) "…made it hard to live a normal life". Other PROs measured were: Depression; Intimate partner violence; Risk of malnutrition; Smoking; Alcohol use; Substance use; Difficulty meeting housing costs.

Results: Of 1632 PWH, 1239 (76%) responded to the adherence assessment; 268 (22%) reported <95% adherence and 106 (9%) reported <80%. Multivariate logistic regression models using 1) 'burden' item alone, 2) 'normal life' item alone, or 3) both, each demonstrated dissatisfaction with ART as significantly associated with <80% adherence (adjusted OR [95% CI], 3.83 [2.25-6.53], 3.12 [1.76-5.52], and 3.28 [1.95-5.52], respectively; P<0.0001) and <95% adherence (adjusted OR [95% CI], 3.36 [2.26-4.98], 2.29 [1.49-3.52], and 2.76 [1.91-4.00], respectively; P<0.05). Other PROs included were not associated with <80% or <95% adherence in the models.

Conclusion: These results suggest that screening patients for treatment dissatisfaction may provide value to adherence management in routine HIV care.

1044 Increasing HIV Testing and Linkage to Care among People Experiencing Homelessness: A Community Engagement Project

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Introduction: People experiencing homelessness are at increased risk for HIV, and people with HIV (PWH) experiencing homelessness are more likely to experience suboptimal HIV health outcomes than PWH who are stably housed. Jefferson County, Alabama consistently has the highest number of new HIV diagnoses in the state, as well as a high percentage of the state's population of people experiencing homelessness (PEH). To address the twin epidemics of both HIV and homelessness within the high-priority setting of Jefferson County, our one-year community-based project aimed to increase HIV testing and linkage to HIV care (LTC) for PEH, the first time that consistent HIV testing and LTC has been provided to PEH in Jefferson County.

Description: *Ending the HIV Epidemic: Addressing HIV Health and Homelessness* (AH3) was the result of a partnership between two well-established nonprofit organizations in Jefferson County, a homeless shelter (The Firehouse) and an AIDS service organization (Birmingham AIDS Outreach [BAO]). Since The Firehouse had not previously provided HIV-related services to PEH, the project leveraged BAO's expertise in community-based testing by placing a full-time case manager at the shelter.

Lesson Learned: HIV testing was highly acceptable to PEH. Through AH3, all shelter guests were offered an HIV test. Of 733 individuals offered a test, only 2.7% (n=20) declined. Nine previously diagnosed, out of care PWH and one newly diagnosed PWH were identified through AH3 testing efforts. Of these, five (50%) were linked to care at a local HIV clinic. The remaining five PWH left the shelter before they could be linked to care, highlighting the frequent transience of the population.

Recommendations: Shelter-based HIV testing and LTC programs can increase successful passage through the HIV care continuum for PEH. Future programs are needed that work closely with linkage and retention in care specialists to ensure that PEH are quickly linked to care.

1051 An Assessment of HIV Program Focusing on Viral Load Monitoring in Patients on Antiretroviral Therapy in Harare City, Zimbabwe, 2021

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Background: Viral load (VL) monitoring for people living with HIV (PLHIV) on antiretroviral therapy (ART) assesses treatment response, detects treatment failure and determines need to switch treatment timely. Harare City Health report showed that patients with VL done declined in 2019 to 4% from 33% in 2018 and 28% in 2017. We evaluated the HIV program focusing on VL monitoring in Harare City to identify challenges affecting quality of care and provide possible solutions.

Method: We conducted a process-outcome evaluation using the logic model adopted from World Health Organization. We interviewed 74 health-workers (HCWs) and 395 PLHIV to assess knowledge on VL monitoring and reasons for low VL monitoring. Ten key-informants were interviewed to verify HCW responses. We used a checklist to assess inputs, processes and outputs.

Results: All 17 facilities studied were offering VL monitoring. Inputs available included human resources, specimen tubes and transport. There was one/three functional VL testing machines, two point-of-care machines, but no reagents nor cartridges for the machines. There were no sample transmittal registers. Training on VL monitoring was done in 70% of HCWs and 92% had good VL monitoring knowledge. Ten facilities were not utilizing monthly cohorts to bleed patients. Results turn-around time ranged from two-eight weeks. PLWHIV's knowledge on VL monitoring was poor in 189/395 (48%). No VL testing campaigns had been done that quarter. Lack of VL machines, reagents and patient unawareness were major reasons cited for low VL monitoring coverage.

Conclusion: Procurement of point-of-care machines at districts is needed to reduce backlogs. Strengthening clinic-laboratory interface with use of transmittal registers has been initiated. Demand creation campaigns and increased health education at facilities is needed continuously. Monthly cohort testing through synchronizing drug refill with VL collection needs strengthening.

1055 Results of a Community and Justice Needs Assessment for HIV Prevention and Treatment and Substance Use Treatment Services for Persons Involved in the Justice System

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Background: Adequate HIV prevention and treatment among persons involved in the justice system requires seamless testing, prevention (PrEP), and treatment services upon reentry to the community.

Method: Results from a needs assessment survey performed as part of the Exploration, Preparation, Implementation, Sustainment (EPIS) framework for the first NIDA-funded hybrid type 1 effectiveness-implementation randomized controlled trial of patient navigation (PN) compared to mobile health unit (MHU) service linkage to HIV prevention and treatment services in the community for justice-involved persons are reported. The online survey was distributed from April 1-June 30, 2021, to community and justice organizations in Connecticut and Texas. The survey included questions regarding HIV, PrEP, HCV, and substance use disorder (SUD) service provision including use of PN and MHUs. Barriers including COVID-19 were also collected.

Results: Of 26 organizations that responded: 9 were justice and 17 were community-based organizations. Direct mapping of the services provided by the justice and community organizations, as well as the barriers and needs reported by the organizations regarding service provision along the HIV, HCV, and SUD care cascades reveal there is evidence of siloed provision of care. Institutional and perceived interpersonal and intrapersonal barriers were identified for these treatment cascades, including lack of appropriate staff, trainings, licensing, stigma, transportation, and insurance.

Conclusion: Identifying the needs and barriers to seamless HIV prevention and treatment services and integration of SUD care for those transitioning to the community from justice settings is important and in line with the U.S. Ending the HIV Epidemic plan. Evaluating ways to improve linkage to services in the community with justice and community service providers and programs will be discussed, including the use of PN and MHU service provision to overcome the identified barriers identified from this early implementation work.

1056 Preferences and Acceptability for Long-Acting PrEP Agents among Pregnant and Postpartum Women with Experience Using Daily Oral PrEP in South Africa and Kenya

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Background: We evaluated long-acting PrEP preferences and acceptability among oral PrEP-experienced pregnant and postpartum women in South Africa (SA) and Kenya.

Method: From September 2021 to February 2022, we surveyed HIV-negative pregnant and postpartum women enrolled in ongoing PrEP studies in Cape Town, SA and Western Kenya. We evaluated oral PrEP attitudes and preferences for future PrEP methods. We report descriptive participant responses and use chi-square and Fisher's Exact tests to compare responses between countries.

Results: We surveyed 190 SA women (67% postpartum; median age 28y; IQR 28-32) and 204 Kenyan women (79% postpartum; median age 25y; IQR 25-33). Overall, 49% of participants reported negative oral PrEP attributes, including side effects (21% SA, 30% Kenya) and pill burden (20% SA, 25% Kenya). Preferred PrEP attributes included long-acting, effective, and safe while pregnant and breastfeeding. Most participants (87% SA, 88% Kenya) preferred oral PrEP over a potential long-acting vaginal ring, mostly due to discomfort with vaginal insertion (82% SA, 48% Kenya). Most participants (74% SA, 76% Kenya) preferred a potential long-acting injectable over oral PrEP, primarily for longer duration of effectiveness in SA (87% SA, 42% Kenya, $p<0.001$) versus discretion in Kenya (5% SA, 49% Kenya, $p<0.001$) (**Table**). Participants were interested in community PrEP delivery but more frequently in SA (59% SA, 25% Kenya, $p<0.001$), due to increased convenience (54% SA, 38% Kenya, $p=0.06$) and reduced potential stigma particularly in Kenya (1.8% SA, 38% Kenya, $p<0.001$). Privacy was cited by most participants preferring clinic pick-up (75%, SA and Kenya).

Conclusion: PrEP-experienced pregnant and postpartum women expressed long-acting PrEP and community delivery preferences, emphasizing the importance of increasing contextually-specific options and choice for PrEP modalities and delivery.

1062 Client Preferences for HIV Care Coordination Program Features: Latent Class Analysis of a Discrete Choice Experiment

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Background: The PROMISE study, launched in 2018, evaluates the implementation of revisions to the HIV Care Coordination Program (CCP) designed to minimize persistent disparities in HIV outcomes among high-need persons living with HIV in New York City. We conducted a discrete choice experiment (DCE) assessing preferences of CCP clients to inform improvements to the program's design and engagement.

Method: Clients chose between two hypothetical CCP options that varied across four program attributes: help with antiretroviral therapy (ART) adherence, help with primary care appointments, help with issues other than primary care, and visit location. Latent class analysis identified different preference patterns.

Results: 181 CCP clients from six sites implementing the revised CCP completed the DCE electronically January 2020-March 2021. 77.3% of responses were obtained before the COVID-19 pandemic. Preferences clustered into 3 segments (Figure). Visit location and ART adherence support were the most important attributes. Group 1 (40%) endorsed telehealth for visit location; telehealth for ART adherence support; and help with securing housing/food; Group 2 (37%) endorsed telehealth for visit location; telehealth for ART adherence support; and staff reminding and arranging transportation for primary care appointments; and Group 3 (23%) endorsed staff meeting clients at the program location and staff working with clients to stick to medication schedules.

Conclusion: This DCE revealed strong preference among participants for telehealth and relatively low preference for intensive services, such as directly observed therapy and home visits; participant preferences were heterogeneous. To balance the preferences of different groups of clients who may benefit from care coordination services, programs should include telehealth options for visits and ART adherence reminders, provide targeted support for housing/food, but also ideally maintain in-person service delivery and intensive support services, especially for individuals with complex psychosocial needs and/or facing barriers to telehealth.

1074 Young Adult Perspectives on Sex, Dating, and PrEP Use during the COVID-19 Pandemic and Improving the Future of PrEP Care

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Background: Few studies have researched young adults' experiences taking HIV pre-exposure prophylaxis (PrEP) after the start of California's COVID-19 shelter-in-place (SIP) orders. The purpose of this study is to examine the facilitators and barriers of PrEP care before and during SIP and to present perspectives of young adults on how to improve PrEP services.

Method: In this mixed-methods study, PrEP users ages 18–29 living in California between April 2020–June 2021 completed a quantitative survey (N=37) and one-on-one qualitative interviews (N=18). Quantitative data were analyzed using frequency analyses with paired t-tests to evaluate the change in mean number of sexual partners before and during SIP. Qualitative data were analyzed using framework analysis, and investigators used the merge approach to associate qualitative and quantitative data.

Results: Among 37 survey participants, 57% reported trouble accessing PrEP care during SIP, citing trouble obtaining medication refills, finding available clinic appointments, and completing PrEP lab work. Participants reported a reduction in sexual partners from a mean of 4.2 partners/month prior to SIP to 3.1 partners/month during SIP (p=0.04). In qualitative interviews, participants expressed their preferences for LGBTQ+-friendly providers who are knowledgeable about PrEP and more accessible PrEP service delivery across the PrEP care continuum, including fully remote options for labs and provider visits and alternative forms of PrEP.

Figure

Table

Conclusion: Despite pandemic SIP orders and trouble accessing PrEP services, young adults continued to engage in sexual behaviors. There is an urgent need to improve provider PrEP and LGBTQ+ healthcare competence and diversify healthcare delivery models.

1078 Low Intra-Patient Variability in ARV Plasma Concentrations is Associated with Low Viral Load – Findings from a Longitudinal HIV Study with Ingestible Sensor Monitoring

Yan Wang (presenting)[1], Veenu Bala[2], Yilan Huang[1], Di Xiong[1], Jie Shen[1], Linyu Zhou[1], Lisa Siqueiros[3], Marc Rosen[4], Courtney Fletcher[2], Eric Daar[3], Honghu Liu[1]

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Background: Adherence to antiretroviral medications (ARV) is critical to achieve viral suppression for persons with HIV infection (PWH). Accurately measuring adherence to ARV remains a clinical and research challenge. Our aim was to link ARV plasma concentrations with subsequent HIV viral load (VL) in order to show that the importance of the PK of the encapsulated medicine.

Method: PWH were randomized into two groups, Ingestible Sensor (IS) and Usual Care (UC). Plasma samples were collected at baseline and monthly. ARV concentrations were quantified. A population PK model was developed using nonlinear mixed-effects modeling with estimation of intraindividual variability (inter-occasion variability routine, Phoenix NLME). The integrated PK adherence measure (IPAM) was calculated as the discrepancy between individual measured and predicted concentrations at weeks 4,8,12,16,20,24,28. The acceptable range for each measured concentration was defined as ±40% of predicted. A high IPAM score indicates a high concentration predictability and high adherence. Ingestible sensors were used to measure adherence daily from baseline to week 16 for IS group. VL data were collected monthly during the first 16 weeks and at week 28 for both groups.

Results: We included 86 (IS:44, UC:42) PWH receiving a tenofovir alafenamide (TAF)-containing regimen. The median IPAM score was 100% for IS group and 86% for UC group (p=NS). A higher IPAM score was associated with a lower VL (p=0.01) using the repeated measures model for log-transformed VL, adjusting for groups and study week.

Conclusion: The IPAM score measuring intra-patient PK variability over time served as a measure of adherence during the study period. The association between a high IPAM score and low VL over time supported that IPAM score can be used as a biomarker to validate medication adherence.

1081 Rural-Urban Disparities in Stage 3 HIV (AIDS) Diagnoses in Tennessee: A Guide for Targeted HIV Screening Interventions

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Background: Identifying factors associated with accelerated progression to Stage 3 HIV (AIDS) is vital to improving HIV-related health outcomes through intensified testing/prevention programs. This study evaluates time to Stage 3 HIV diagnoses in Tennessee, focusing on rural vs. urban disparities.

Method: We used individual-level surveillance data to capture demographics and HIV outcomes from the Tennessee Department of Health enhanced HIV/AIDS Reporting System and US Census Bureau data to define a "proportion-rural" population for each Tennessee county. Adults diagnosed with HIV between January 1, 2015, and December 31, 2019, were included. Individuals were followed from HIV diagnosis until Stage 3 diagnosis, death, or administrative censoring on March 31, 2020. Stage 3 diagnosis was defined by documentation of an opportunistic illness, CD4 count <200 cells/μL, or CD4% <14. Cox models were used to estimate adjusted hazard ratios (aHR) and 95% confidence intervals (CI) for Stage 3 diagnosis.

Results: We included 3,652 newly HIV-diagnosed adults; median age at diagnosis was 30 years (interquartile range [IQR]: 25, 42), 56.3% were non-Hispanic Black, and 25.1% received a Stage 3 diagnosis during follow-up. Median time from HIV diagnosis to Stage 3 diagnosis was 23 days (IQR: 11, 263). Residence in high proportion-rural counties at HIV diagnosis (aHR=1.51, 95% CI 1.1-2.1) and Hispanic race/ethnicity (aHR=1.6, 95% CI 1.2-2.1) were associated with an increased hazard of Stage 3 diagnosis (Figure 1, Figure 2)

Conclusion: In Tennessee, rural residence and Hispanic race/ethnicity were associated with a shorter time to Stage 3 HIV diagnosis indicating these populations are being diagnosed late in the disease process. Efforts to increase uptake of early HIV testing should be focused on the needs of these vulnerable populations.

1082 Comparison of HIV-Related No-Show Rates by Visit Modality in the Early Versus Late Phase of the COVID-19 Pandemic

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Background: The United States suffered multiple COVID-19 waves during the course of the pandemic. This study aimed to study the differences in HIV-related no-shows by visit modality between an early-COVID-19 (Mar20-Mar21) and a late-COVID-19 (Mar21-Jun22) period.

Method: This retrospective cohort study used HIV-related primary care provider visits from an academic HIV clinic in the Southern U.S. The outcome of each visit was categorized no-show or no no-show. Logistic regression model using generalized estimating equations accounting for repeat measures in individuals calculated odds of having no-show among in-person, video, and telephone visits in early-COVID-19 versus late-COVID-19 period. The models were adjusted for age, race/ethnicity, gender, income, housing status, income, and HIV risk factor.

Results: The study population comprised of 2,863 unique individuals (Black: 66%, male: 76%, median age: 49 years). Overall, 16,223 visits (early-COVID-19: 44%, late-COVID-19: 56 %) were analyzed; early-COVID-19 period (in-person: 81%; video: 8%; telephone: 11%) and late-COVID-19 period (in-person: 98%; video: 1%; telephone: 1%). In multivariable analysis, the odds of no-show were similar between early-COVID-19 and late-COVID-19. Assessing no-shows by visit modality, video visits [AOR (95% CI): 0.48 (0.36, 0.64)] and telephone visits [AOR (95% CI): 0.28 (0.21, 0.38)] had lower odds of no-shows than in-person visits in the early-COVID-19 period; video visits had had higher odds of no-shows than telephone visits [OR (95% CI): 1.71 (1.14, 2.79)]. During late-COVID-19 period, only video visits had lower odds of no-shows than in-person visits [OR (95% CI): 0.42 (0.18, 0.97)]; telephone versus in-person visits and telephone versus video visits had similar no-shows.

Conclusion: This study found that while HIV-related no-shows were similar during the early-COVID-19 and late-COVID-19 period, association between no-shows and visit modality were significantly different during the early-COVID-19 period and attenuated mostly in the late-COVID-19 period.

1087 Sustaining Access to HIV and SHRH Services for KPs during COVID-19 – A Collaboration between Wilkins Infectious Diseases Hospital and GALZ, Harare, 2022

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Introduction: Wilkins Infectious Diseases Hospital (WIDH) was the first public health facility in Zimbabwe to offer HIV/SRHR services to key populations (KPs). Due to COVID-19, WIDH was designated a COVID-19 isolation and treatment center, resulting in closure of other services including the KP clinic. Solutions to maintain KPs' access to HIV services while minimizing exposure to COVID-19 were needed. GALZ is an organization of LGBTI people in Zimbabwe.

Description: In May 2020, an outreach KP clinic, run twice weekly by two nurses and one doctor from WIDH was established at GALZ. In April 2021, the static KP clinic at WIDH was reopened whilst the GALZ clinic continued running. KP attendances, HIV testing services (HTS) coverage, antiretroviral therapy (ART) coverage and pre-exposure prophylaxis (PrEP) initiations were compared for the period before and during the COVID-19. Attendances increased from 399 in 2018-19 to 1203 in 2020-21. The majority seen in 2020-21 were men who have sex with men whereas in 2018-19 it was female sex workers. In 2020-21, top five reasons for seeking services were STI management (40.2%%), PrEP (22.2%), general conditions (16.7%), ART (14.8%) and HTS (9.8%). Comparison between 2018 and 2021 showed that HTS increased from 33% to 50.9%, ART from 56.8% to 78.2% and PrEP from 6% to 33%.

Lesson Learned: Quick adaptation to the prevailing environment by WIDH resulted in continuity of KP services. Provision of KPs services through both facilities based and community-based models increases access to care. This is a model that can be replicated through partnerships between WIDH and other KP organizations.

Recommendations: WIDH should engage more KP organizations in Harare to establish similar outreach clinics in locations with which different categories of KPs identify.

1090 Navigating Barriers to Pediatric Viral Load Suppression in Rural Zambia

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Introduction: DAPP in Zambia collaborates with Western Provincial Health Office (with funding from CDC) to implement the OVC Mongu Project. The project aims at improving the health, welfare, and living conditions of vulnerable children and adolescents living with (CALHIV) or affected by HIV, with a focus on supporting treatment adherence and viral load suppression.

Description: Between October 2020 and November 2021, the OVC project was implemented in 16 public health facilities in Mongu District, Western Province of Zambia. The project served 5,372 individuals among which 1,055 were CALHIV. The project used Individual Case Management Plans to address the following barriers:

- Incorrect dosage provided to CALHIV by guardians
- Inconsistence in timing and uptake of ART
- Targeted support for adolescents to stay adherent through the transition to adulthood
- Long distances between residence of CALHIV and public health facilities and also
- Under- and malnutrition

Lesson Learned: By end of November 2021, the number of CALHIV with documented valid viral load results increased from 794 to 907, recording a 14% increase, while those with suppressed viral loads increased from 87% (692) to 92% (834).

Recommendations: Barriers to pediatric viral load suppression in CALHIV can be mitigated rapidly through individual case management plans and integrated support for vulnerable families as demonstrated by the OVC Mongu Project. Key recommendations include:

- Cross-sectorial coordination with social, education, and health services, coordinated by a community-based case manager
- Home-based support/adherence groups (Trios) for children with detectable viral loads
- Leveraging community-based groups, teen clubs, as a platform for health education
- Nutrition support and integrated care for CALHIV with malnutrition
- Transport incentives for families of CALHIV to support clinical monitoring

1092 Is Trauma Experience Associated with Poor Retention in HIV Care and Viral Suppression?

Bonnie Stedge (presenting)[1]

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Background: Intimate partner violence and childhood physical and sexual violence have been linked to poor HIV outcomes, but whether histories of general trauma are associated with reduced adherence and viral suppression (VS) remains unknown. As this understanding is critical for Ryan White-funded HIV clinics (RWCs) to prioritize screening and support services, we examined whether lifetime trauma is associated with retention in HIV care and VS among people with HIV (PWH).

Method: As part of a larger cross-sectional study examining comprehensive violence experiences, from February 2021-March 2022, 150 PWH age 18+ were recruited from RWCs and AIDS Service Organizations in Atlanta. Participants completed a survey including the Trauma History Questionnaire (THQ, scored 0-24) and had blood drawn for HIV viral load. Medical charts were extracted for 6- and 24-month retention in HIV care.

Results: Mean total THQ score was 7.08 (σ= 4.12), with mean subscale scores of 1.63 on Physical/Sexual Experiences, 3.85 on General Disasters/Traumatic Events, and 1.60 on Crime-Related Events. Higher subscale scores on Physical/Sexual Experiences were negatively associated with VS (OR:0.783, p=0.023) and higher subscale scores on General Disasters were associated with greater 24-month retention (OR:1.160, p=0.039). After adjusting for gender, race, and education, Physical/Sexual Experiences score remained negatively associated with VS (AOR:0.768, p=0.017); General Disasters score was no longer significantly associated with retention.

Conclusion: Our findings suggest that lifetime physical/sexual violence, but not other forms of trauma assessed in the THQ, negatively impact VS. They suggest that RWCs should prioritize screening of physical and sexual trauma, and ensure resources are dedicated to supporting those who screen positive.

1097 Attitudes towards Participating in Digital Pill-Based Adherence Research for Oral HIV Pre-Exposure Prophylaxis among Men who have Sex with Men with Substance Use

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Background: Digital pill systems (DPS) verify medication adherence via ingestible radiofrequency sensors that activate in the stomach. Applied to oral HIV pre-exposure prophylaxis (PrEP), DPS can provide real-time information surrounding nonadherence. Among men who have sex with men (MSM), substance use can increase PrEP nonadherence and HIV risk. This study explored attitudes toward participation in DPS-based research among MSM who use substances.

Method: Through an ad partnership with Grindr, we surveyed adult MSM who were on PrEP, sexually active in the past three months, and scored ≥2 on CAGE Drug Use questions. Surveys covered substance-related risk (ASSIST), PrEP use, sexual history, DPS attitudes, willingness to participate in DPS research, data preferences, and perceived usability (System Usability Scale [SUS]).

Results: Of 983 individuals screened, 268 were eligible (27.3%) and 157 participated (response rate: 58.6%; median age: 33). Most were cisgender (95.5%), White (75.8%), and non-Hispanic or Latinx (78.4%). Participants reported a median of six sexual partners over three months; most engaged in condomless sex (62.4%) and substance use proximate to sex (71.9%). Substance-related risk was common (per ASSIST criteria, alcohol: 39.5% moderate risk, marijuana: 51.6% moderate risk). Most reported taking ≥4 doses of PrEP/week (94.9%); 59.2% endorsed at least moderate worry about adherence. DPS were viewed as extremely or very useful for remaining accountable for PrEP adherence (58.0%). Participants were willing to participate in DPS studies (87.3%), primarily to contribute to research (43.1%). Most were not concerned about real-time monitoring by researchers (61.1%); participants were interested in viewing adherence data daily (42.0%) or weekly (33.1%). SUS scores indicated above average usability (median: 70, IQR: 55-82).

Conclusion: MSM taking PrEP with substance use reported favorable attitudes towards DPS and openness to research. These data will inform future DPS-based trials and could directly impact PrEP adherence in this population.

1099 Supporting the ART: Medication Adherence Patterns in Persons Prescribed Ingestible Sensor-Enabled Oral Pre-Exposure Prophylaxis (PrEP) to Prevent HIV Infection

Sara Browne (presenting)[1]

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Background: Timely, accurate adherence data may support oral PrEP success and inform prophylaxis choice. We evaluated an FDA-approved digital health feedback system (DHFS) with ingestible-sensor-enabled (IS) tenofovir-disoproxil-fumarate plus emtricitabine (Truvada®) in persons starting oral PrEP.

Method: HIV-negative adults were prescribed IS-Truvada® with DHFS for 12 weeks to observe medication taking behavior. Baseline demographics, urine toxicology and self-report questionnaires were obtained. Positive detection accuracy and adverse events were computed as percentages, with Kaplan Meier Estimate for persistence-of-use. In participants persisting ≥ 28 days, adherence patterns (taking and timing) were analyzed, and mixed-effects logistic regression modelled characteristics associated with treatment adherence.

Results: Seventy-one participants enrolled, mean age 37.6 years (range 18-69), 90.1% male, 77.5% white, 33.8% Hispanic, 95.8% housed and 74.6% employed. Sixty-three participants (88.7%) persisted ≥28 days, generating 4987 observation days, average 79.2 (29-105). Total confirmed doses were 86.2% (CI_{95} 82.5, 89.4), decreasing over time, OR 0.899 (CI_{95} 0.876, 0.923) per week, p<0.001; 79.4% (CI_{95} 66.7%, 87.3%) of participants had ≥80% adherence. Pattern analysis showed days without confirmed doses clustered (p=0.003). Regular dose timing was higher among participants with ≥80% confirmed doses (0.828, CI_{95} 0.796 to 0.859) than among those with <80% (0.542, CI_{95} 0.405 to 0.679) p<0.001. In multi-predictor models, better adherence was associated with older age, OR 1.060 (CI_{95} 1.033, 1.091) per year, p<0.001; negative vs positive methamphetamine screen, OR 5.051 (CI_{95} 2.252, 11.494), p<0.001.

Conclusion: DHFS with IS-Truvada® distinguished adherent persons from those potentially at risk of prophylactic failure in near-real time. Ongoing methamphetamine substance use may impact oral PrEP success.

1110 The Impact of Differentiated Service Delivery Models of HIV Treatment on 12-Months Retention in Antiretroviral Therapy for Patients Enrolled in HIV Care in Mozambique

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Background: Universal ART was introduced in Mozambique in 2003; however, coverage remains suboptimal. To maximize infrastructure and personnel and improve patient's retention in tretament, the MOH adopted eight Differentiated Service Delivery (DSD) models in 2018. We assessed the impact of the DSD initiative on 12-month ART retention nationwide.

Method: We constructed patient cohorts based on ART initiation month from the Electronic Patient Tracking database (covering 36% of the 1633 facilities providing ART nationally) in pre-rollout (01/2016–11/2018) and post-rollout (06/2019 – 12/2020) periods. An uncontrolled interrupted time series analysis compared ART retention at 12-months post ART initiation in the pre- and post-rollout periods using a linear mixed-effects regression with random province slopes and health facility and province random-intercepts. Both DSD and standard of care patients were included in the post-rollout period.

Results: We included 379/584 health facilities with data with 639,036 and 100,959 patients in pre- and pos-rollout periods, respectively. Baseline 12-month retention was 66.9% (95%CI: 60.1-73.7), decreasing to 63.9% (95%CI: 52.3-75.3) by 12/2018. Twelve-month retention increased to 70.7% (95%CI: 57.1-83.9) immediately after DSD rollout in 06/2019 (an increase of 6.7% (95%CI: 2.8-10.6)). The additional monthly increase in 12-month retention in ART post-rollout compared to pre-rollout was 1.4% (95%CI: 0.8-2.1).

Conclusion: To our knowledge, our study is the first to assess DSD model impact implemented at national scale. Our findings demonstrated a significant and positive association between DSD models implementation and retention at 12-months post ART initiation, demonstrating their potential for improving the effectiveness of HIV services.

1112 Fidelity of Implementation of Differentiated Service Delivery Models for HIV Treatment in Mozambique in 2021

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Background: In 2018 Mozambique's MOH decided to implement and scale up eight Differentiated Service Delivery (DSD) models to improve HIV treatment outcomes, namely fast flow (FF) – semiannual visits, community ART support groups (CASG), 3-monthly antiretrovirals dispensing (3M), ART adherence clubs (AC), and four integration models: three one-stop models (for tuberculosis, maternal and child health (MCH), and adolescents) and the family approach (FA). We aimed to assess the fidelity of implementation of these models.

Method: Four health facilities were included in Sofala province, a setting with high HIV treatment demand, in June 2021. Fidelity data was collected through in-depth interviews, focal group discussions and direct observation of intervention implementation. We used an adapted Carrol's framework to study fidelity of each model in each site, by comparing the following components of intervention implementation against the national guidelines: 1) details of implementation (the service package components, who offered them and where), 2) frequency (when the procedures were implemented), and 3) coverage (proportion of patients enrolled). We considered complexity, resource availability, provider's training, site characteristics and COVID-19 as potential moderators.

Results: FF and 3M had the highest coverage (over 80%), and AC and CASG were temporally discontinued due to COVID-19. For all models, the laboratory component of the service package had the lowest fidelity, as tests were performed out of time due to lack of material or provider non-compliance to the schedule due to lack of training. One-stop model for MCH presented the highest fidelity. Lack of adequate space limited both the implementation and the fidelity (when implemented) of the other two one-stop models in small sites.

Conclusion: Lab test performance was the main challenge to implementation fidelity, and COVID-19, lack of resources and training were the most important fidelity moderators.

1117 Prevention-Effective Adherence to Oral PrEP among Pregnant and Postpartum Women in South Africa

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Background: We report objective and self-reported PrEP adherence during pregnancy/postpartum and its overlap with recent sexual activity.

Method: We enrolled pregnant women without HIV at first antenatal visit with follow-up through 12-months postpartum in Cape Town, South Africa. Eligible women ≥16-years old, received HIV prevention counseling and were offered PrEP (TDF-FTC). We quantified tenofovir diphosphate (TFV-DP) in dried blood spot and compared it with self-reported adherence in those reporting taking PrEP in the past 30-days. We assessed TFV-DP (≥2 estimated doses per week compared with <2 doses per week) by pregnancy vs. postpartum. Logistic regression models were performed using generalized estimating equations to evaluate associated correlates, including recent sexual activity, estimating the odds ratios adjusting for age and pregnant vs. postpartum status.

Results: Among 382 women who started PrEP in pregnancy, median age was 27yrs and 54% were >20wks pregnant at enrollment. Half had quantifiable TFV-DP at any time point (52%), declining over time from 67% in pregnancy 31% of postpartum women at 12-month follow-up. Overall, 72% had concentrations corresponding to <2 doses per week; 25% had levels corresponding to 2-6 doses/week; lower in postpartum vs. pregnancy (aOR=0·44, 95% CI=0·35-0·54) (Fig 1). Women who reported more frequent sex in the past month (≥5 times vs. <5 times/no sex) and breastfeeding postpartum women (vs. non-breastfeeding postpartum women) had increased odds of having TFV-DP commensurate with >2 doses/week (aOR=1.84, 95% CI=1.04-3.24).

Conclusion: In a subset of sexually active pregnant and postpartum, and in breastfeeding women, recent PrEP adherence was higher, indicating the importance of prevention effective adherence in this population. Focusing adherence interventions on pregnant/postpartum women at risk remains essential.

1122 DOTS PLUS: A Promising Approach to Increasing Adherence to Tuberculosis, Drug-Resistant Tuberculosis, and Antiretroviral HIV Treatment in Mozambique

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Introduction: Mozambique is among the highest-burden countries for TB, TB/HIV co-infection, and drug-resistant TB (DR-TB), and over 75% of estimated DR-TB cases remain undetected. Currently, 47% of DR-TB cases are among PLHIV. Addressing barriers to treatment adherence must be a national priority to ensure PLHIV with TB successfully complete their treatment regimens and reduce mortality. Since 2019, ADPP Mozambique has implemented a holistic, person-centered approach through the enhanced Direct Observation Treatment Strategy (DOTS) PLUS, funded by USAID.

Description: ADPP, a local Mozambican organization, leads the implementation of the Local TB Response (LTBR) project across four provinces in partnership with FHI 360, Comusanas, Kupulumusana, and DIMAGI. DOTS PLUS includes direct observation of treatment, **plus** psychosocial support, financial support (for nutrition, transport, and other costs), and provision of pillboxes to keep patients on track. It includes medication monitoring, regularly scheduled refills, home deliveries, and accompanying patients to follow-up appointments.

Lesson Learned: During the first two years, the project identified 32,676 new TB cases, and 86 DR-TB cases. From May 2020 to September 2021, 250 DR-TB patients received support from LTBR, with 99% adherence to TB and ARV treatment (for those with HIV), and 65% achieving culture conversion upon treatment completion, with zero loss to follow up. These impressive results compared to a national average of only 60% for TB treatment completion, likely due to the added features of DOTS PLUS.

Recommendations: Providing DOTS PLUS for people with TB, TB/HIV, and DR-TB is crucial for ensuring treatment adherence as it provides wrap-around care and follow-up, improving treatment success and reducing morbidity and mortality. ADPP will continue to promote DOTS PLUS for all TB and HIV response efforts, in a collaborative effort with the Ministry of Health and partners.

1125 Do Differentiated Service Delivery Models Work for Second-Line Therapy? Outcomes for South African Second-Line ART Clients Enrolled in DSD Models Compared to Conventional Care

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Background: South Africa's National Adherence Guidelines allow for clients receiving second line ART (2L) to enroll in differentiated service delivery (DSD) models for HIV treatment, but outcomes for this group have not been documented. We analyzed routine data to determine whether retention in care and viral suppression are similar for clients receiving 2L who are enrolled in DSD models compared to those receiving 2L who were eligible for but not enrolled in DSD models.

Method: We created a retrospective cohort of all 2L clients who were alive and in care on 01 February 2019 at 24 facilities in South Africa using electronic TIER.Net system data. We estimated 12-month retention and viral suppression (<400 copies/ml[3]) at 3-18 months after cohort start. Clients were considered eligible for DSD if they met guideline eligibility criteria (adult ≥18 years + same treatment regimen for ≥12 months + previous 2 viral loads suppressed) at the cohort start date and were considered enrolled in DSD if their record contained an indicator of enrollment.

Results: Of 2,283 clients receiving 2L, 64% were female, median age was 34 years, and 82% had initiated ART ≥5 years before cohort start date. 148 (6%) were both eligible for and enrolled in DSD models, while 596 (26%) were eligible for but not enrolled in DSD models (the rest were not eligible). 12-month retention and viral suppression were 97% and 78%, respectively, for those eligible for and enrolled in DSD and 95% and 78% for those eligible for but not enrolled in DSD, respectively (unadjusted retention risk ratio [95% CI] 1.02 [0.99-1.06]) (Table).

Conclusion: For clients on second-line ART in South Africa, retention and viral suppression were similar for those enrolled in DSD models compared to those eligible but not enrolled.

1128 Acceptability of a Differentiated Package of Oral PrEP Adherence Interventions among Adolescent Girls and Young Women in South Africa: Results from the PrEP SMART Trial

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Background: Oral PrEP is highly effective for HIV prevention, but PrEP adherence is challenging for adolescent girls and young women (AGYW). Acceptability of differentiated, stepped PrEP adherence support based on individual needs assessment.

Method: PrEPSMART was a sequential multiple assignment randomized trial of PrEP adherence interventions in Johannesburg from 2019–2022. Sexually active, HIV-negative women ages 18 to 25 years were offered PrEP and randomized to standard PrEP counseling with weekly two-way SMS or WhatsApp group support. "Non-responders" were rerandomized to quarterly visits with drug-level feedback (DLFB) or issue-focused monthly counseling. In-depth interviews were conducted around months 2, 6, and 9. Deductive coding and memo-writing were used to summarize themes.

Results: We interviewed 48 AGYW (SMS=23; WhatsApp=25). Of these, 25 were non-responders (monthly counseling=16, DLFB=9). Participants valued the interventions and described them as non-judgmental platforms to discuss PrEP experiences and life challenges. SMS provided remote access to healthcare support and allowed AGYW to report PrEP side-effects and receive advice from providers. WhatsApp groups facilitated peer support and learning from shared PrEP experiences. Challenges with mHealth interventions included technical issues, lost phones, and no data access; however, SMS and WhatsApp interventions served as PrEP reminders. Several AGYW had concerns with confidentiality in WhatsApp groups. Some benefited from the groups but did not want to participate. For non-responders, monthly counseling offered a safe space to discuss PrEP and personal wellbeing, although some experienced challenges returning to clinic for visits. DLFB counseling was also acceptable. DLFB concentrations encouraged PrEP use although impact on subsequent PrEP adherence was short-lived.

Conclusion: PrEP SMART interventions were acceptable to AGYW. mHealth interventions and monthly counselling helped to address issues AGYW PrEP users face. All interventions could potentially improve PrEP adherence.

1136 The Role of Patient Navigators and Mobile Health Units in Behavioral and Healthcare Services Delivery with Justice-Involved Individuals

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Background: Early linkage to preventative care and treatment for infectious diseases and Opioid Use Disorder (OUD) are essential for addressing and reducing health risks for individuals returning to the community from justice settings.

Method: As part of the early implementation exploration phase of a five-year NIDA-funded hybrid type 1 effectiveness randomized controlled trial (RCT) comparing 2 linkage approaches in 4 distinct communities (2 in TX and 2 in CT), six focus groups (N= 20 participants) were conducted with justice and community stakeholders to examine perspectives on implementing patient navigator (PN) and mobile health unit (MHU) models to facilitate access to HIV treatment and pre-exposure prophylaxis (PrEP) prevention services, as well as HCV and OUD treatment. Thematic analysis examined the following research aims: (1) understand the role of PNs and MHUs for prevention and treatment services linkage for justice-involved populations; (2) examine where PN and MHU services are deemed most effective at overcoming barriers to services; and (3) understand barriers and inform recommendations for starting MHU and PN models for the RCT.

Results: (Aim 1) Identified themes demonstrated that both models could facilitate improved access to prevention and treatment services. (Aim 2). PN follow-up services in the community were associated with sustained treatment, and MHUs were viewed as a bridge to community providers. (Aim 3). Barriers included relatability and trust; a prominent recommendation was for PNs with shared living experience to be part of the PN model for greater relatability with clients, and for PNs and MHU staff to be knowledgeable about services to address client questions and concerns with confidence.

Conclusion: Stakeholders identified that PN and MHU models might improve HIV prevention and treatment service delivery for individuals during re-entry. Findings will be discussed with regard to implementing PN and MHU programs.

1141 A Global Scoping Review of the Factors Associated with HIV and Syphilis Co-Infection: Findings From 40 Countries

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Background: Human immunodeficiency virus (HIV) and syphilis co-infection poses a threat to certain populations, and patients may have considerably poorer health outcomes due to these infections. Understanding which risk factors predispose individuals' co-infection will be pivotal for prevention efforts. Our objective was to therefore provide a scoping review of the literature regarding the factors associated with HIV-syphilis coinfection.

Method: Our scoping review followed the screening process as per the Preferred Items for Systematic Review and Meta-Analysis extension for Scoping Review (PRISMA-ScR) guidelines. We conducted searches in three different databases: PubMed, Scopus, and Web of Science.

Results: A total of 109 articles were eligible for inclusion. 68,634 co-infected patients were included in our review. Findings from studies across 40 countries demonstrated that males – particularly men who have sex with men (MSM) – compose the overwhelming majority of co-infected cases. MSM who had receptive anal sex were at a higher risk. Additional risk factors include a low CD4 cell count, current or past sexually transmitted infections, and a high number of sexual partners. A number of co-infected patients had a prior history of syphilis, and were hence currently re-infected.

Conclusion: Our findings have important implications in guiding public health programs across the globe that aim to lower rates of HIV-syphilis co-infection. MSM have been shown to a highly vulnerable group and supporting this group will therefore be integral in public health programs. More research is also needed on the role of educational attainment, comorbidities, and consistent condom usage on risk for co-infection.

1147 Performance and Acceptability of a Urine Point-of-Care Test for Drug-Level Feedback Counselling on PrEP Use among Young Women in South Africa

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Background: Adherence to daily pre-exposure prophylaxis (PrEP) for HIV prevention is challenging for adolescent girls and young women (AGYW). A point-of-care (POC) urine test may identify AGYW who need adherence counselling. We assessed performance and acceptability of a POC urine test for drug-level feedback (DLFB) counselling among AGYW in Johannesburg.

Method: PrEP SMART was a sequential multiple assignment randomized trial of stepped PrEP adherence support for AGYW ages 18-25 years. A subset of 163 AGYW completed a urine POC test with DLFB counselling at 9/12 months. A positive test indicated PrEP use in the last week. Dried blood spot (DBS) samples were obtained at 9 months for comparison (n=115). Tenofovir diphosphate (TFV-DP) ≥700 fmol/punch indicated high adherence. Acceptability of the POC test was assessed via computer assisted self-interview.

Results: Participant median age was 21 years. Overall, 44% (72/163) had a positive urine POC result. Of those with a DBS and negative urine POC (n=61), 100% had TFV-DP concentration <700 fmol/punch. Among those with a DBS and positive POC (n=54), 48% had TFV-DP concentrations ≥700 fmol/punch while 22% had TFV-DP concentrations 350-699 fmol/punch (Figure 1). Most (98%, 153/156) reported they would choose urine POC DLFB in the future; 96% (150/156) found the results understandable; 94% (145/155) liked DLFB counselling; and 97% (152/156) agreed that urine POC DLFB would motivate PrEP adherence.

Conclusion: A negative urine POC test successfully identified participants with poor adherence. Positive POC tests were less able to discriminate between consistent and inconsistent adherence over the longer term. Nevertheless, most AGYW found DLFB counselling using urine POC acceptable. Further research is needed to evaluate the effectiveness of urine POC-based DLFB counselling for adherence support.

1148 HIV Testing Drive among Out of School Youth in Blue Collar Communities

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Introduction: Stigma free access to HIV services for out-of-school youths is one of the major challenges encountered in Nigeria's HIV/AIDS response. Insufficient focus on this demographic of youths in HIV prevention and treatment interventions poses a serious challenge on HIV programs targeting Adolescents and young people groups.

Description: Youth Network on HIV/AIDS in Nigeria implemented the HIV testing drive project targeting out-of-school youths in Blue-collar communities (mechanic villages and motor parks) using the MTV-Shuga drama series to drive uptake of HIV services. The intervention included interpersonal communication, community outreaches, film shows, condom distribution, referral services across 3 Local Government in Lagos (Ajeromi, Ikorodu, and Lagos Mainland). Scenes from MTV-Shuga were used to open discussions and elicit strategic discussions to understand their awareness on HIV and risky behaviours. 1126 persons (787Males, 339female) were reached and tested for HIV.

Lesson Learned: Findings from the intervention revealed that most youth in Blue-collar settings engage in risky behaviour such as unprotected sex, multiple sexual partners, alcoholism, and drug use. Community HIV Testing data also showed that 71% (802 people) had never tested or been counselled for HIV/AIDS and hence had little knowledge about HIV. 12 people tested Positive (4Males, 8Females) and were immediately linked to care. The approach provided an opportunity for Out-of-school Youths to know more about HIV.

Recommendations: HIV programming must be inclusive of various youth demographics for meaningful change to occur in communities. It is evident that among out-of-school youths, there is a need for increased HIV prevention and treatment programs targeting informally employed and trained youth, domiciled in blue-collar communities like Mechanic and Motor Parks. A focus on these, alongside ongoing efforts targeting their in-school counterparts will ensure meaningful progress towards epidemic control.

1154 Amphetamine Use and its Associations with ART Adherence and Viral Load among Cisgender Sexual Minority Men Living With HIV

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Background: Substance use poses multiple challenges for HIV treatment efforts. It remains critical for research to capture the complexities of high-priority populations with intersecting barriers to HIV care such as sexual minority Black and Hispanic men living with HIV (LWH). Thus, the current study explores the associations between substances and viral load while accounting for confounders relevant to HIV and substance use.

Method: The sample includes 350 Black and Hispanic young adult cisgender, sexual minority men LWH from Georgia, a state which leads the US in new HIV diagnoses. Multivariable linear regression analyses examined the role of specific drugs (i.e., alcohol, cannabis/THC, cocaine, and combined amphetamines and methamphetamines) as measured by urinalysis directly on viral load and indirectly through their effects on ART adherence while controlling for common demographic (i.e., age, income, ethnicity) and health characteristics (i.e., HIV self-efficacy, access to HIV care, substance use counseling, depressive symptoms).

Results: High ART adherence rates and high HIV self-efficacy was consistently associated with lower HIV viral load. Alcohol and cocaine use were not associated with viral load or ART adherence. Cannabis use was negatively associated with low ART adherence ($B = -.976$, $p = .004$) but not viral load. Amphetamine use was the only substance to demonstrate significant direct effects to higher viral load ($B = .788$, $p = .004$) while also indirectly influencing HIV viral load through a negative association with ART adherence.

Conclusion: These findings are the first to suggest that amphetamine and methamphetamine use impacts viral load both directly and indirectly through ART adherence. These results are in line with previous research on stimulants and the first to systematically control for potentially confounding health characteristics. Direct intervention addressing amphetamine use and HIV among this population is warranted, and more is needed to explore how amphetamine use directly impacts viral load.

1160 Implementing MedViewer for Daily Adherence Feedback: How Feasible and Acceptable Is Use of a Novel Hair-Based Antiretroviral Monitoring Tool in Busy Clinical Encounters?

Carol Golin (presenting)[1], Elias Rosen[1], Ella Ferguson[1], Rose Perry[1], Amanda Poliseno[1], Alexandra Munson[1], Lauren Hill[1], Jessica Keys[1], Nicole White[1], Claire Farel[1], Angela Kashuba[1]

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Background: Antiretroviral therapy adherence is vital to HIV care, but novel approaches are needed to augment current interventions monitoring and supporting adherence.

Method: We pilot-tested feasibility and acceptability of MedViewer (MV), a new intervention that provides real-time, longitudinal adherence feedback to patients and providers through graphical reports. MV uses infra-red matrix-assisted laser desorption electrospray ionization for imaging of daily antiretroviral concentrations in patients' hair. We used mixed methods to assess implementing MV at a busy ID clinic. Before receiving MV reports, providers received training and patients watched an informational video about MV. We administered patient and provider questionnaires at baseline and within 24 hours of clinic visits. We conducted in-depth-interviews (IDIs) with patients approximately 1 month after clinic visits and with providers after they had seen at least 2 MV patients. We generated descriptive statistics from questionnaire responses, conducted thematic analyses of IDI transcripts, and integrated findings.

Results: Sixteen providers and 36 patients enrolled. Among 37 clinic visits, the MV report was discussed 35 times (94%), 30 (81%) had the assay completed within 2 hours of its initiation, and 76% had both their assay completed within 2 hours and discussed the report with their provider. In IDIs, patients and providers described MV reports as "simple" and "interpretable." Providers reported that reviewing reports with patients was not burdensome or disruptive to routine clinical practice. In questionnaires, all providers said they would recommend MV to some of their patients; 97% of patients would use MV routinely in the future if available, 87% of providers and 85% of patients were "very satisfied" with the patient MV reports, 97% of patients were "very satisfied" with adherence discussions with providers using MV.

Conclusion: MedViewer use was feasible and well-regarded by patients and providers to facilitate ART adherence discussions.

1161 Telemedicine Implementation at a Midwestern HIV Clinic: Strategy and Year 1 Outcomes

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Background: During the COVID-19 pandemic, our clinic transitioned quickly to telemedicine. Several HIV clinics described lower viral suppression rates during the pandemic. We aim to describe the implementation strategy as well as Year 1 outcomes of telemedicine at our clinic.

Method: We developed a multifaceted strategy for telemedicine implementation, which included: 1) assess for readiness and identify barriers and facilitators, 2) prepare champions, 3) organize clinician implementation meetings, and 4) staff training. Once telemedicine became available, the clinic quickly adopted it in April 2020. We continuously updated an algorithm on patient eligibility and monitored outcome through chart reviews between May 1, 2020, to April 30, 2021. We collected demographic information, federal poverty level (FPL) and monitored viral suppression (VLS), defined percentage of patients with HIV RNA < 200 copies per mL; and number of patients lost to care (LOC) defined as no follow up within 12 months period.

Results: We conducted a total of 2298 ambulatory medical visits, 1642 were in-person and 656 (29%) were telemedicine visits. Out of those, 2177 were follow up visits (649, 30% telemedicine). There was no difference in telemedicine utilization based on race (28% in African Americans vs. 32% in Whites; ethnicity (30% in Hispanic vs. 30% in Hon-Hispanic); gender (24% in females vs. 30% in males); or FPL (28% in FPL <200% vs. 31% in FPL>200%. By the end of April 2021, overall clinic viral suppression rate was 90% and there were 40 patients LOC, compared to 92% and 43 in April 2020, respectively.

Conclusion: Telemedicine was a safe alternative to in-person visits during the COVID-19 pandemic. We observed similar rates of utilization across demographic and FPL status. Applying selection criteria, VLS and LOC rates were not adversely impacted by shift to telemedicine modality.

1166 Internalized HIV Stigma is Longitudinally Associated with Lower HIV Medication Adherence

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Background: Internalized HIV stigma (IHS) is an important concern among people with HIV (PWH). IHS has been shown to be associated with increased HIV viremia and missing visits among PWH. There is a need to quantify the impact of IHS on antiretroviral therapy (ART) adherence, especially in the current medication era. Herein we examined associations between IHS and adherence.

Method: CFAR Network of Integrated Clinical Systems (CNICS) is a longitudinal, US-based, multisite, cohort of PWH in clinical care who complete tablet-based assessments as part of routine HIV-care visits. Data include: 4 Likert scale (low 1-5 high) IHS items; ART adherence, depression, and quality of life assessments; and details on substance use, and other outcomes. We examined associations between IHS score and ART adherence using generalized linear latent and mixed models with a nonparametric random effects intercept to accommodate repeated measures.

Results: 9704 PWH completed IHS questions annually from 2016-2021. Complete data were available for 19,025 observations. The median age was 49 years, 17.8% were cisgender-women and 1.3% were transgender-women; 42.4% were non-White. Detectable viremia was strongly associated with low self-reported ART adherence using the visual analog scale (VAS). HIV medications adherence by VAS was reduced by 0.32% for every point increase in IHS after controlling for depressive symptoms, health-related quality of life, age, gender, ethnicity, geographic location and substance use. This translates to a 5.2% decrease in ART adherence from the highest to lowest IHS score.

Conclusion: Our study demonstrates that IHS likely has a profound impact on reduction in ART adherence, which could impact other comorbid health outcomes that are influenced by unsuppressed viremia over time. Developing a thorough understanding of the mechanisms through which IHS impacts ART adherence is critical for developing interventions to mitigate IHS and improve health outcomes across their lifespan.

1169 Rapid RestART: A Re-Linkage Program in the South

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Introduction: Rapid start programs have steadily become the gold standard for HIV linkage, as indicated by the IAS guidelines. Retention in HIV care continues to pose major problems for sustained viral suppression and engagement in care. Most rapid start linkage programs are limited to treatment naïve clients due to resistance concerns and lack of staffing capacity.

Description: In July 2019 at our FQHC in New Orleans, we began a Rapid Re-Entry program for treatment experienced clients living with HIV after the sustained success of our CrescentCare Start Initiative

Lesson Learned: There was high demand for linkage of this out of care population. Our navigators linked 133 patients from July 2019's soft roll-out through August 2020. The sustained viral suppression and retention data are all during the COVID-19 pandemic, which greatly impacted our numbers. Laboratory access at our clinic was severely limited during 2020 and we relied heavily on telehealth appointments in place of in person visits. 72% of RRE clients were virally suppressed and 88% attended their follow up appointment. 12 months after linkage, 75% of the RRE clients completed an appointment with a provider or case manager and 44% were virally suppressed. A limitation of this data is that many of the clients not considered virally suppressed at 12 months have not had labs but may still be adhering to their ART.

Recommendations: The importance of getting clients back on ART quickly benefits the health of the patient as well as the community due to U=U. Prioritizing out of care individuals for immediate access to medical visits and antiretrovirals communicates the importance of adherence to those patients and may improve retention in care. More data analysis is needed now that services have returned to pre-pandemic capacity to determine the success and viability of this intensive re-engagement program.

1173 Electronic Dose Monitoring Feedback (EMF) with Youth: Qualitative Exploration of Reactions to Viewing Their Dosing Calendars

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Background: Electronic dose monitoring feedback (EMF) has been identified as a promising adherence intervention across medical conditions. Approaches to providing EMF vary dramatically, and little research has focused on the visual displays used for EMF or reactions to them. EMF through dosing-calendars may be of particular interest for youth living with HIV (YLWH) in the US, who interact frequently with data visualizations through social feeds and media. How YLWH react to dosing-calendar EMF may advise EMF visual-displays for mHealth tools.

Method: YLWH in the ATN152 TERA remote coaching intervention were presented with their dosing-calendar (Figure 1)– a calendar that used color and text to signal dosing outcome for each day based on data from electronic smart-bottles. This EMF was delivered in the context of a supportive exploration where coaches provided youth an opportunity to reflect and share their reactions. We examined coaching intervention transcripts and identified main themes in reactions to the EMF among the 43 intervention arm participants (72 session transcripts from study week-4 and -12).

Results: Youth (between 14 and 25 years of age; 46% vertically acquired HIV) had 7 kinds of 'reactions' (Figure 2). Pride or satisfaction with the adherence calendar was common; 64% of participants in week-4 sessions and 69% in week-12 session. , followed by feeling empowered or motivated (44%, 31%). Over half (58%) verbalized surprise, either positive (31%,33%) or negative (11%, 8%). Shame/guilt was also identified (22%, 19%), with 67% of these in reaction to dosing-calendars with under 80% adherence.

Conclusion: Most participants had positive reactions, even in cases with sporadic adherence, however when negative reactions occurred, they were largely in response to low adherence calendars. These kinds of tools may offer youth unique opportunities to reflect on adherence patterns over time.

1183 Three-Year Follow-Up of PositiveLinks: Higher Use of mHealth Platform Associated with Sustained HIV Suppression

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Background:
PositiveLinks (PL) is a mHealth platform to support care engagement by people with HIV (PWH). Among other features, self-monitoring is a key activity on PL. Daily reminders prompt the user to report mood and stress levels as well as medication adherence. Response rate to check-ins on PL has been associated with better suppression of viral load over 6-18 months. We present an analysis over three years of follow-up.

Method: We conducted a retrospective chart review between July 1, 2017, and June 30, 2021, and collected any available data between 6 months and 36 months after enrollment date. We collected demographic information and all viral loads obtained in usual patient care. We performed time-to-event survival analysis until first unsuppressed viral load stratified by high PL usage (≥48% check-in completion) and low usage with a Kaplan-Meier curve and multivariate Cox Proportional Hazards Model.

Results: There were 485 participants, predominately male (77.4%). About half (48.7%) were white, and 43.3% were black/African American with a median FPL of 104.0 (IQR 0.0-243.5). A Kaplan-Meier curve showed that high PL use was associated with better viral load suppression (VLS) over time ($p<0.0001$((aHR) of 0.437 (95% CI 0.290-0.658, $p<0.001$)) after adjusting for age and FPL (federal poverty level). Age (aHR of 0.969 (95% CI 0.953-0.984)) and FPL (aHR of 0.9966 (0.9949-0.9983, $p<0.001$) were also independently associated with VLS.

Conclusion: High check-in response rate on the PL app, older age, and higher income are associated with sustained viral load suppression over time. mHealth-supported self-monitoring of mood, stress, and medication adherence may be an important tool to promote long-term viral suppression. Lack of response to check-ins may signal an early need for additional support.

1187 Barriers to Retaining Key Populations in Antiretroviral Treatment: Findings from an Implementation Science Study in Lusaka, Zambia

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Background: As part of an implementation science study riding on the Key Populations Investment Fund (KPIF) program – an HIV prevention, treatment and care program for key populations supported by the U.S. Centers for Disease Control and Prevention in Lusaka, Zambia – we adapted the social network strategy – a peer driven self-referral approach – to identify men who sex with men (MSM), female sex workers (FSW), and people who inject drugs (PWID) who had dropped out of treatment.

Method: Opened-ended, in-depth interviews (n=40) and focus group discussions (n=30) were conducted with MSM, FSW, and PWID who had stopped treatment. In addition, in-depth interviews with health care providers and peer promoters drawing from the key population groups (n=15) were conducted. Data were analysed using open coding first, and then interpreted using latent content analysis.

Results: At personal level, failure to deal with side effects of medication and feeling healthy forced key populations to discontinue their medication. At inter-personal level, a desire to avoid involuntary disclosure of HIV status to sexual partners/sex work clients and parents/guardians forced key populations to prioritize their relationships at the expense of their own health. Health-system-level factors included stigma and discrimination by health care providers, and denial of access to treatment when key population went for drug-refill at health facilities outside KPIF sites. The high mobility of FSW in search of sex work opportunities outside the KPIF sites compounded by the opportunity costs of traveling back for treatment forced FSW to abandon medication.

Conclusion: Patient-centered interventions, including patient-provider dialogue about treatment experiences, are required to address personal-level factors whilst efforts should be made to improve ART access regardless of location. There is also a need for sensitization of key populations on the risks of alternative treatment and self-prescription and (ab)use of antibiotics.

1226 Role of Visit Type in the HIV-Related No-Shows during the COVID-19 Pandemic: A Multisite Retrospective Cohort Study

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Background: The emergence of the COVID-19 pandemic necessitated rapid expansion of telehealth as part of healthcare delivery. The objective of this study was to compare HIV-related no-shows by visit type (in-person; video; telephone) during the COVID-19 pandemic using data from the Data for Care Alabama project, a consortium of seven HIV-care facilities across Alabama.

Method: Using all primary care provider visits, the outcome for each visit was categorized as no-show or arrived. A logistic regression model using generalized estimating equations accounting for repeat measures in individuals and within sites estimated the odds of having no-show by visit modality during six quarters of the COVID-19 pandemic (Apr2020-Sep2021). The multivariable models adjusted for sociodemographic factors.

Results: The study population (n=6861) was predominantly Black (68%) and male (70%), with a median age of 45 years. Overall, 27,969 visits included 73% in-person, 5% video, and 21% telephone visits, and their overall no-show rates were 20%, 12%, and 13%, respectively. In-person visits versus telephone visits [AOR (95% CI): 1.64 (1.48 1.82)] and in-person versus video visits [AOR (95% CI): 1.53 (1.25 1.86)] had higher odds of being a no-show; no differences observed between video and telephone no-shows. Higher no-shows for in-person versus telephone visits persisted throughout the study period except between Apr21-Jun21, whereas higher no-shows for in-person versus video visits only persisted between Apr20-Sep20 and Jan21-Mar21 (Table 1).

Conclusion: Telephone and video visits had lower no-show rates compared to in-person visits. This may suggest the utility of telehealth visits beyond the COVID-19 pandemic to be advantageous as well as some remaining underlying barriers associated with in-person visits in the COVID-19 era that need consideration.

1229 "PrEP My Way": A Novel PrEP Delivery System to Meet the Needs of Young African Women

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Background: Young women face numerous barriers to PrEP use, with stigma and structural barriers creating particular challenges for persistence. Supportive community-based delivery systems offering privacy and convenience may improve their ability to take PrEP.

Method: We employed user-centered design to develop PrEP My Way, which involves clinic-based PrEP initiation and other sexual health services, with follow-up care through community-based peer delivery of a visually appealing kit (Figure) with pictorial/video guidance. The kit includes an HIV self-test, PrEP, vaginal swab for chlamydia/gonorrhea self-sampling, pregnancy test, and contraception. We randomized women (age 16-24) 1:1 to receive PrEP My Way vs in-person standard-of-care in Kisumu, Kenya. At 1, 3, and 6 months, participants receive PrEP My Way kits at their preferred location or can return to the standard-of-care clinic. We analyzed data descriptively and by study arm using a two-sample proportion test. Figure_PrEP_My_Way

Results: We enrolled 150 young women (Table); follow-up is on-going. Of 149 anticipated kit deliveries to date, 135 (91%) have been successful (96% Month 1, 88% Months 3 and 6). Sexually transmitted infections have been diagnosed in 34 (27%). Acceptability of the PrEP My Way intervention at 6 months has been high with 88% preferring it to clinical care and a median systems usability scale of 70 (IQR 65-79; consistent with "good" performance). PrEP delivery/pick-up at 6 months was 20/27 (74%) with PrEP My Way arm versus 13/25 (52%) for the standard-of-care (p=0.10). Table_PrEP_My_Way

Conclusion: PrEP My Way is a novel PrEP delivery system with high preliminary feasibility and acceptability. Impact on PrEP persistence is promising. Future research should explore scalability in routine care and involve emerging PrEP formulations.

1247 "Give Me the Kit": Choice of Self-Collected Testing in TelePrEP

Christopher Hall (presenting)[1]

1 Molecular Testing Labs, Vancouver, WA, USA

Background: Orally dosed HIV PrEP requires tri-monthly laboratory testing, leading to barriers threatening persistence including access to testing sites, logistics (e.g., transportation, work/childcare), stigma around accessing sites not perceived as accepting, and inconvenience. Molecular Testing Labs supports specimen self-collection for lab-based testing in PrEP users in the United States. However, preference for self-collected testing remains unknown.

Method: Molecular offers test kits for HIV, hepatitis B, creatinine, and syphilis (by dried blood spot), and gonorrhea/Chlamydia (including extragenital testing, by NAAT). We analyzed patients initiating PrEP in 2021 at the telehealth partner QcarePlus, collecting demographic, SOGI, and geolocation information and asking about preferred test collection. We estimated prevalence ratios and 95% confidence intervals using log-binomial regression model.

Results: In 2021, 5,090 patients initiating PrEP and 4,180 (82.1%) indicating a specimen collection preference. Of the latter, 84.1% (n=3,515) reported preference for self-collection. This preference was higher among males vs. females (PR=1.35, 95%CI: 1.15, 1.57). Compared to those >55, preference was higher in all other age groups, particularly those <25 (PR=1.06, 95%CI: 1.00, 1.13). Compared to non-Hispanic whites, preference for self-collection was lower among non-Hispanic Black (PR= 0.92, 95%CI: 0.88, 0.96) and Hispanic patients (PR=0.99, 95%CI: 0.93, 0.99).

Conclusion: This analysis demonstrates an overwhelming proportion of this telePrEP cohort preferred self-collected testing – stronger among those who are male, younger, from non-metropolitan areas, yet lower among Black and Hispanic patients. Convenient laboratory testing is key to continuously staying on PrEP, and self-collected testing can address access barriers related to logistics, inconvenience, and stigma for programs seeking to maximize equitable access to PrEP in priority populations.

1261 HIV Epidemic Control Efforts and Resultant Key HIV Trends in Bangkok (2018-2020)

Helen Olowofeso (presenting)[1], Imane Sidibé[2] Christopher Duncombe[2], José M. Zuniga[1,2]

[1] Fast-Track Cities Institute, Lagos, Nigeria
[2] International Association of Providers of AIDS Care, Washington, DC, USA

Background: Achieving epidemic control requires steady efforts to maintain progress across the prevention and care continua. Fast-Track Cities focus on addressing gaps related to service delivery to attain the 95-95-95 targets. Notable progress on reaching HIV targets have been achieved in Bangkok.

Method: An analysis of data from 2018 to 2020 was conducted to examine progress towards 95-95-95 targets alongside prevalence, incidence, and mortality rates in Bangkok. The data reflects the results of the city's efforts towards epidemic control with innovative interventions such as the Reach-Recruit-Test-Treat-Prevent-Retain (RRTTPR) approach, the Key Population Led Health Services model (KPLHS), Same-Day ART (SDART) and Differentiated Service Delivery (DSD) to scale-up testing, prevention, and treatment.

Results: Bangkok's 95-95-95 trends have shown significant improvement with the 1st 95 target increasing between 2018 and 2019 and sustained in 2020. The 2nd 95 target showed substantial progress between 2019 and 2020. Additionally, the 1st and 3rd 95 targets were exceeded in 2019 and 2020. The 3rd 95 target was maintained from 2019 to 2020. HIV incidence, prevalence and mortality reduced by an average of 2.75, 0.015 and 4.95 (per 100,000 people) during the 3 years.

Conclusion: Bangkok has made substantial progress on 95-95-95 targets, HIV incidence, prevalence, and mortality rates throughout the 3 years since its commitment as a Fast-Track City. The city has implemented innovative interventions in support of HIV epidemic control. The HIV strategic interventions implemented by Bangkok can be leveraged across the Fast-Track Cities network. These interventions will help address multiple barriers to prevention, HIV service delivery and HIV treatment adherence. The city will need to galvanize efforts to sustain all the gains from current accomplishment

FIGURES

ORAL ABSTRACT 1043

Table 1. Adjusted Odds Ratios From Multivariate Logistic Regression Models for Association With <95% Adherence to ART Among PWH (SMH and MSCC)

Variable	Category	Adjusted OR (95% CI)	
Model 1: HATQoL burden item			
HATQoL burden item[b]	Dissatisfied (vs satisfied)	3.357 (2.263-4.979)	**<0.0001**
Difficulty meeting housing costs	No (vs yes)	0.880 (0.608-1.273)	0.4974
Depression (PHQ-9)	Mild/None (vs moderate/severe)	0.875 (0.582-1.317)	0.5226
Intimate partner violence (IPV-4)	No (vs yes)	0.678 (0.398-1.157)	0.1542
Risk of malnutrition	No (vs yes)	0.704 (0.476-1.042)	0.0792
Model 2: HATQoL normal life item			
HATQoL normal life item[c]	Dissatisfied (vs satisfied)	2.286 (1.487-3.516)	**0.0002**
Difficulty meeting housing costs	No (vs yes)	0.808 (0.561-1.165)	0.2536
Depression (PHQ-9)	Mild/None (vs moderate/severe)	0.759 (0.509-1.131)	0.1757
Intimate partner violence (IPV-4)	No (vs yes)	0.818 (0.481-1.391)	0.4575
Risk of malnutrition	No (vs yes)	0.711 (0.484-1.046)	0.0836
Model 3: Combined HATQoL items			
Combined HATQoL items	Dissatisfied (vs satisfied)	2.762 (1.905-4.004)	**<0.0001**
Difficulty meeting housing costs	No (vs yes)	0.871 (0.604-1.255)	0.4571
Depression (PHQ-9)	Mild/None (vs moderate/severe)	0.804 (0.538-1.200)	0.2856
Intimate partner violence (IPV-4)	No (vs yes)	0.779 (0.459-1.323)	0.3557
Risk of malnutrition	No (vs yes)	0.730 (0.495-1.077)	0.1126

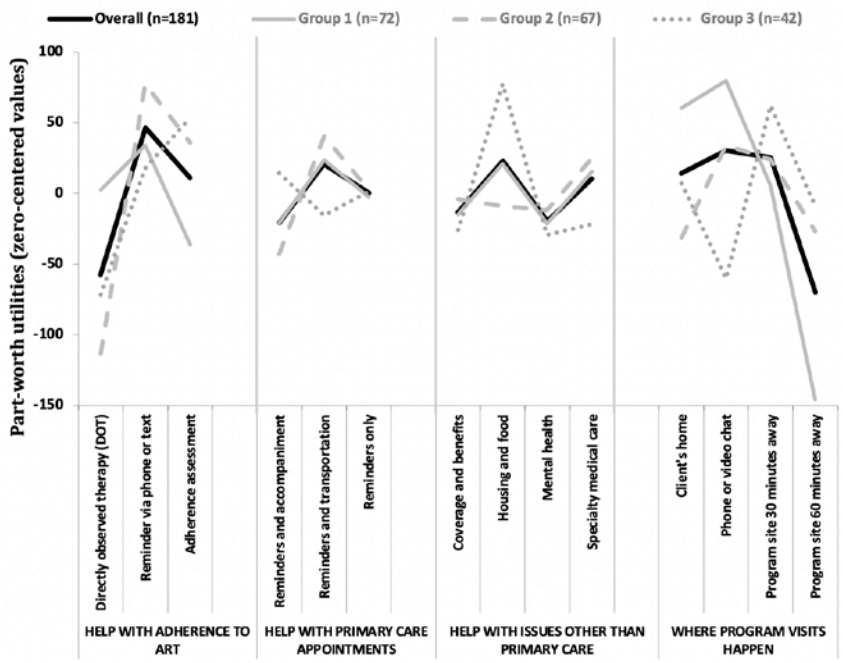
ART, antiretroviral therapy; CI, confidence interval; HATQoL, HIV/AIDS-targeted quality of life; MSCC, Midway Specialty Care Center; OR, odds ratio; PWH, people with HIV; SMH, St Michael's Hospital.
[a]N=950, N=951, and N=961 in models 1, 2, and 3, respectively. [b]In the past 4 weeks, taking my [HIV] medicine

Table 2. Adjusted Odds Ratios From Multivariate Logistic Regression Models for Association With <80% Adherence to ART Among PWH (SMH and MSCC)

Variable	Category	Adjusted OR (95% CI)	*P* value
Model 1: HATQoL burden item			
HATQoL burden item[b]	Dissatisfied (vs satisfied)	3.832 (2.250-6.526)	**<0.0001**
Difficulty meeting housing costs	No (vs yes)	0.944 (0.537-1.660)	0.8422
Depression (PHQ-9)	Mild/None (vs moderate/severe)	0.892 (0.498-1.597)	0.7015
Intimate partner violence (IPV-4)	No (vs yes)	0.678 (0.321-1.428)	0.3064
Risk of malnutrition	No (vs yes)	0.696 (0.399-1.212)	0.2002
Model 2: HATQoL normal life item			
HATQoL normal life item[c]	Dissatisfied (vs satisfied)	3.118 (1.761-5.521)	**<0.0001**
Difficulty meeting housing costs	No (vs yes)	0.895 (0.511-1.568)	0.6993
Depression (PHQ-9)	Mild/None (vs moderate/severe)	0.870 (0.485-1.560)	0.6397
Intimate partner violence (IPV-4)	No (vs yes)	0.763 (0.365-1.595)	0.4723
Risk of malnutrition	No (vs yes)	0.698 (0.402-1.211)	0.2009
Model 3: Combined HATQoL items			
Combined HATQoL items	Dissatisfied (vs satisfied)	3.278 (1.945-5.524)	**<0.0001**
Difficulty meeting housing costs	No (vs yes)	0.915 (0.522-1.606)	0.7572
Depression (PHQ-9)	Mild/None (vs moderate/severe)	0.908 (0.507-1.626)	0.7445
Intimate partner violence (IPV-4)	No (vs yes)	0.763 (0.364-1.601)	0.4748
Risk of malnutrition	No (vs yes)	0.688 (0.396-1.195)	0.1847

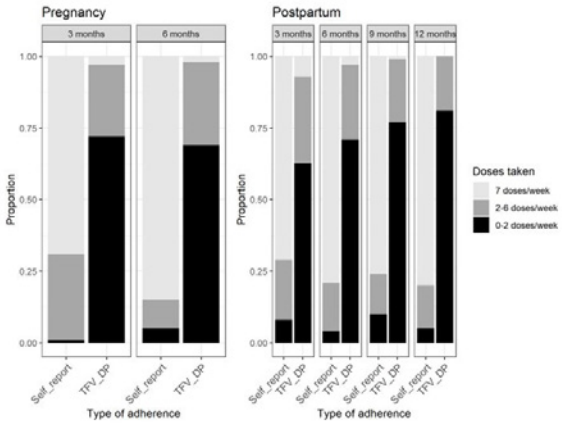
ART, antiretroviral therapy; CI, confidence interval; HATQoL, HIV/AIDS-targeted quality of life; MSCC, Midway Specialty Care Center; OR, odds ratio; PWH, people with HIV; SMH, St Michael's Hospital.
[a]N=950, N=951, and N=961 in models 1, 2, and 3, respectively. [b]In the past 4 weeks, taking my [HIV] medicine

ORAL ABSTRACT 1062 – FIGURE 1



ORAL ABSTRACT 1117

Figure 1: Estimated number of doses taken in the prior 7 days by study visit, pregnancy status, self-report, and TFV-DP concentrations in DBS

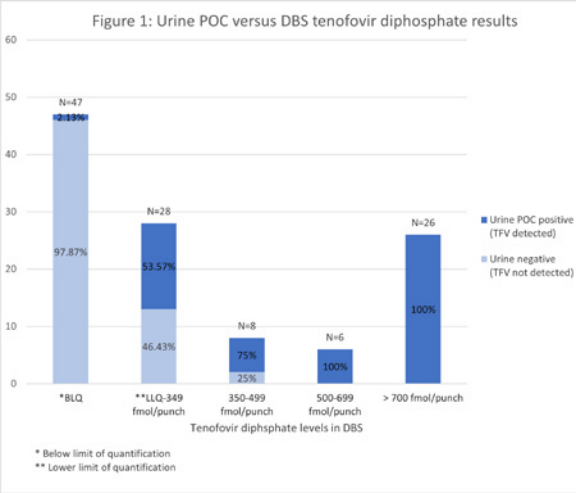


ORAL ABSTRACT 1125

Table. 12-month retention and viral suppression outcomes by DSD model enrolment status for those on second line ART

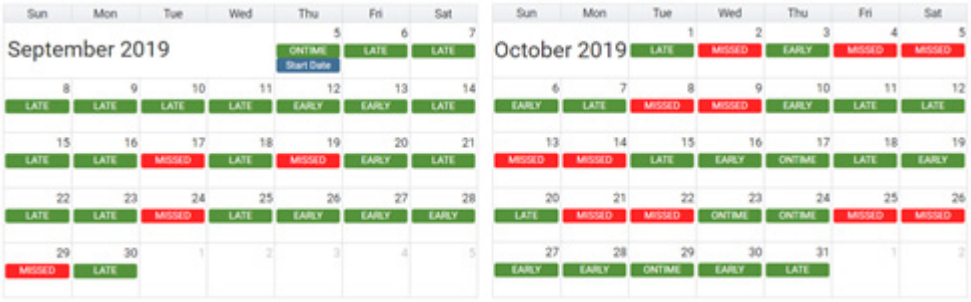
Outcomes	Total	Eligible for and enrolled in DSD		Eligible for but not enrolled in DSD		Not eligible for but enrolled in DSD		Not eligible for and not enrolled in DSD	
N	**2,283**	**148**	**6%**	**596**	**26%**	**92**	**4%**	**1,447**	**63%**
Retention outcome at 12 months									
Alive and in care at 12 months	2,043	143	97%	564	95%	88	96%	1,248	86%
Transferred to another facility	105	2	1%	20	3%	2	2%	81	6%
Lost to follow up	120	2	1%	10	2%	2	2%	106	7%
Died	15	1	1%	2	0%	0	0%	12	1%
Viral suppression in months 3-18									
VL suppressed	1,339	116	78%	462	78%	57	62%	704	49%
VL unsuppressed	440	14	9%	44	7%	12	13%	370	26%
No VL test reported within 3-18 m	504	18	12%	90	15%	23	25%	373	26%

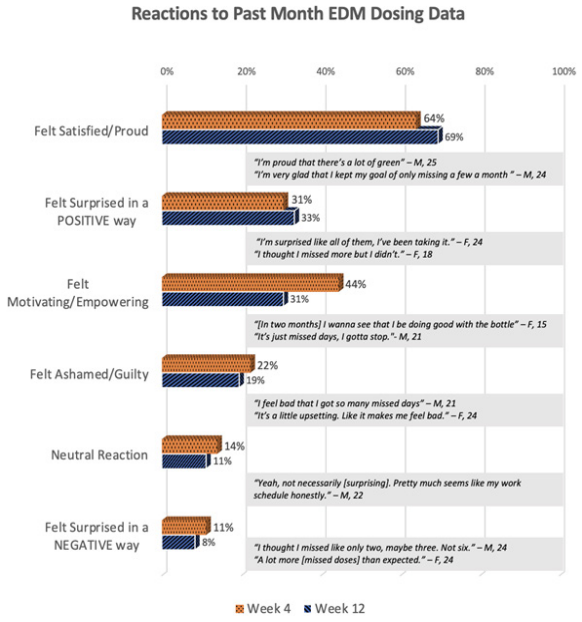
ORAL ABSTRACT 1147



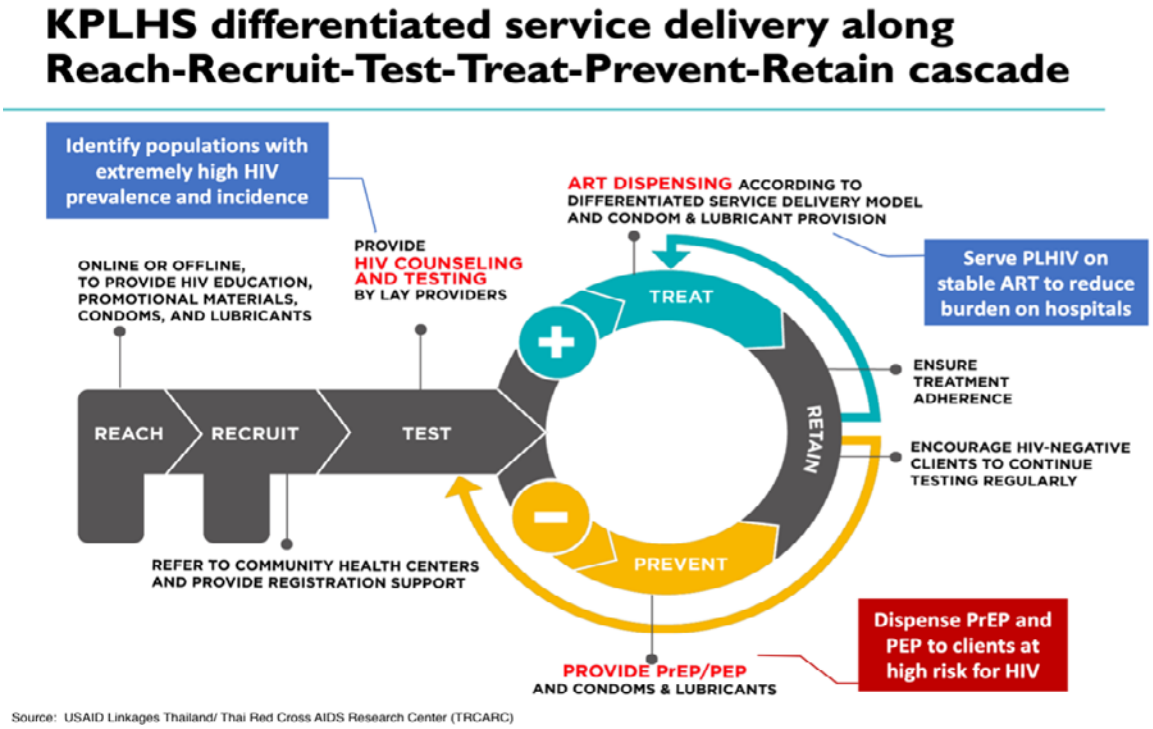
FIGURES

ORAL ABSTRACT 1173 – Figures 1 and 2

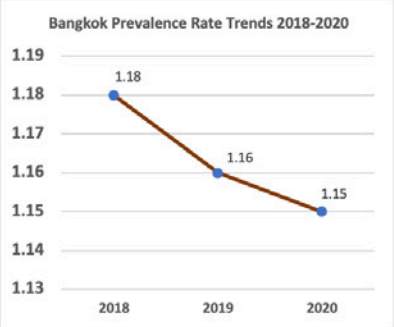


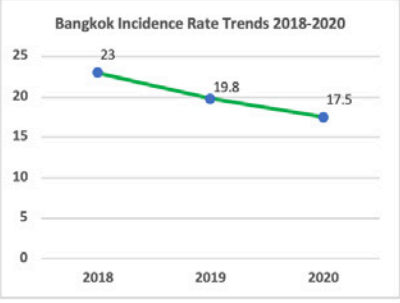


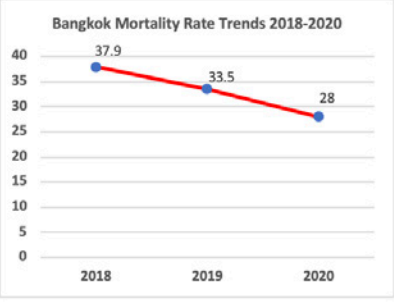
ORAL ABSTRACT 1261



Source: USAID Linkages Thailand/ Thai Red Cross AIDS Research Center (TRCARC)







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