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Session: 84. Antimicrobial Stewardship: Better Prescribing, Better Outcomes
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Background. Pyuria is often used as a surrogate for bacteriuria and may trigger antibiotic use even in the setting of negative cultures. The impact of preoperative pyuria on empirical antibiotic use and on postoperative outcomes has not been evaluated in large multisite studies. Thus, we investigated rates and outcomes associated with treated versus untreated preoperative pyuria in a national cohort of surgical patients.

Methods. All patients who underwent standardized Surgical Quality review after cardiac, orthopedic implant, or vascular surgery within the national VA health care system from October 1, 2008 to September 30, 2013 and had a urinalysis performed in the 30 days before surgery were eligible. Rates of preoperative pyuria (≥5 WBCs and/or positive leukocyte esterase) and antibiotics were measured. Adjusted rates of 30-day postoperative surgical (SSI) and urinary tract (UTI) infections were determined by a trained nurse reviewer using CDC definitions and compared between pyuria patients who did or did not receive antibiotics before surgery.

Results. Among 17,749 preoperative urinalyses, 755 were culture-positive and 16,994 were culture-negative. Among culture negative patients, 1,812/16,994 (10.7%) had urinalyses diagnostic of pyuria. Antibiotics were prescribed to 574 (32%) of pyuria-positive, culture-negative patients. After adjusting for diabetes, smoking, age, and ASA score, the rate of post-op SSI was similar among antibiotic-treated pyuria patients (13/574, 2.3%) compared with those not treated (21/1,238, 1.7%), aOR 1.33, 95% (0.66–2.69, $P = 0.41$). Post-op UTI was also not reduced among pyuria treated (17/351, 4.8%) vs. untreated (39/893, 4.4%), aOR 1.09, 95% (0.60–1.96, $P = 0.76$).

Conclusion. In this large national study cohort, almost 1/3 of pyuria-positive preoperative patients received antibiotics despite negative cultures. Antibiotic treatment was not associated with clinical benefits, including no reduction in post-operative SSI or UTI. There is an opportunity for diagnostic stewardship to reduce preoperative urinalysis testing and unnecessary antibiotic exposure.

Disclosures. **K. Itani**, Pfizer: Grant Investigator, Research grant. Sanofi: Grant Investigator, Research grant. **K. Gupta**, Iterum Therapeutics: Consultant, Consulting fee. Paratek Pharmaceutical: Consultant, Consulting fee. Tetraphase: Consultant, Consulting fee.

859. Same-Day HIV Pre-exposure Prophylaxis (PrEP) Initiation During Drop-in STD Clinic Appointments Is a Safe, Feasible, and Effective Method to Engage Patients at Risk for HIV in PrEP Care

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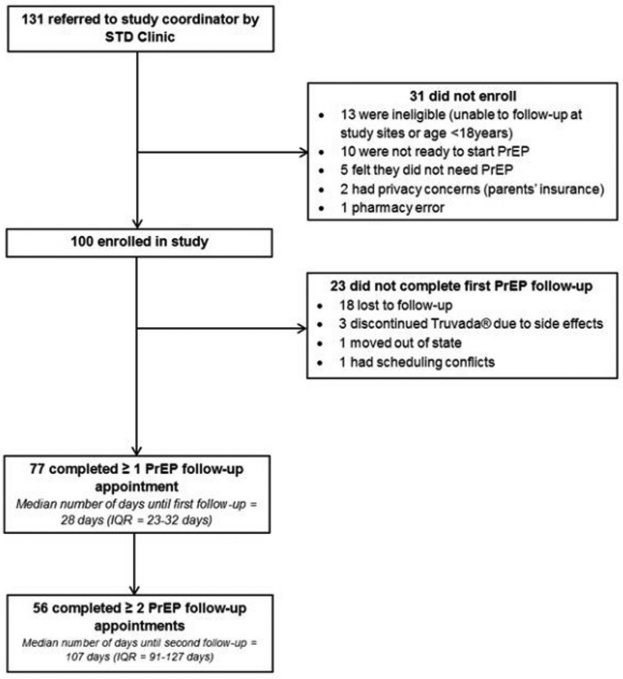
Background. Patients at risk for HIV generally do not have immediate access to PrEP. We hypothesized that by offering free, 30-day PrEP starter packs and navigation support during drop-in STD clinic appointments, individuals would be likely to initiate and continue PrEP.

Methods. Individuals aged ≥18 years presenting for drop-in appointments in the Metro Denver STD Clinic and indicated for PrEP were eligible for the study. Exclusion criteria were history of renal dysfunction, chronic hepatitis B (HBV), HIV, pregnancy, and indications for postexposure prophylaxis. Eligible individuals were provided PrEP education and offered a free, 30-day PrEP starter pack and navigation support for cost assistance. Participants were tested for creatinine, HBV, HIV, and pregnancy at enrollment, and navigated to an appointment for ongoing PrEP care. Participants' medical records were reviewed for a minimum of 4 months after enrollment. Descriptive statistics and logistic regression were used to characterize the study population and follow-up.

Results. From April to October 2017, 100 individuals filled a tenofovir–emtricitabine prescription (figure). Median participant age was 28 years, 98% were male, 53% were non-Hispanic White, 8% non-Hispanic Black, and 34% Hispanic. Median annual income was $24,000, 62% had health insurance, 26% had a primary care provider (PCP), and 50% had a recent bacterial STI. No participants had abnormal baseline creatinine or HBV. 77% completed ≥1 PrEP follow-up visit during the study period; 57% completed their first visit within 31 days. 56% completed a second follow-up visit. No HIV seroconversions were detected during follow-up. Factors significantly associated with attending ≥1 follow-up appointment were age ≥ 30 years, higher income, and having health insurance or a PCP at enrollment. In multivariate logistic regression, only higher income was associated with attending ≥1 follow-up appointment (median income for those with ≥1 follow-up visit vs. no follow-up: $24,960 vs. $14,000, $P < 0.01$).

Conclusion. Providing immediate access to PrEP during drop-in STD clinic visits is a safe and feasible approach to initiation of PrEP care. Additional resources are needed to support PrEP continuity care, particularly for low-income individuals.

Figure: Same-day PrEP study enrollment and follow-up



Disclosures. **K. Kamis**, Gilead Scienes: Research Coordinator, Research grant. **S. Rowan**, Gilead Sciences: Investigator, Research grant.

860. Immediate Access to Post-Exposure Prophylaxis (PEP) Through a 24/7 New York City PEP Hotline

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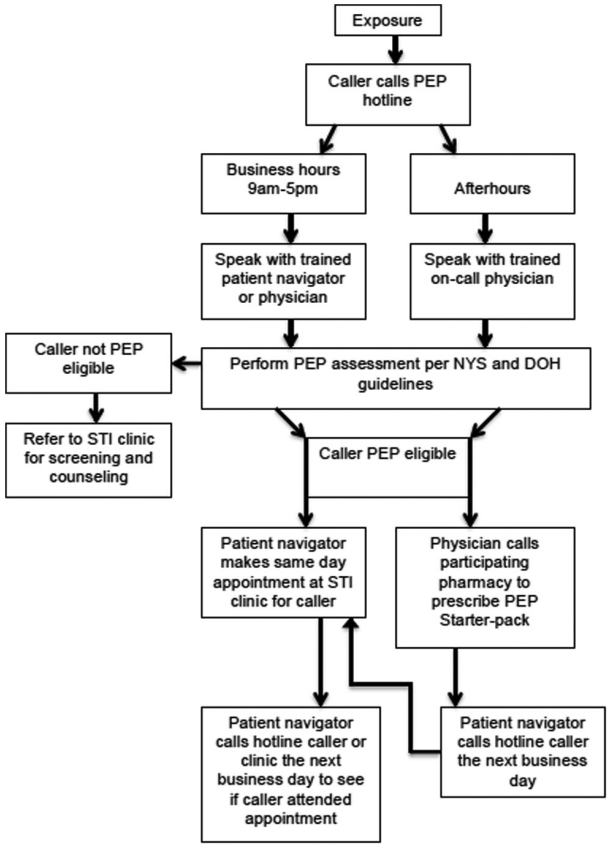
Background. Oral post-exposure prophylaxis (PEP) is effective in preventing HIV transmission. To minimize barriers to PEP for New York City (NYC) residents, the Institute for Advanced Medicine (IAM), Mount Sinai Health System, and the NYC Department of Health and Mental Health established a 24-hour 7-days PEP hotline to provide eligible callers with immediate access to PEP and follow-up clinical care.

Methods. Data from hotline callers (January to December 2017) was analyzed utilizing multivariable logistic regression to determine whether a call resulted in PEP access within 72 hours of exposure by sociodemographic variables and exposure characteristics. We describe transitions from PEP to PrEP (pre-exposure prophylaxis).

Results. The PEP hotline cohort ($n = 1278$) was 83% male, 11% female, 1% transgender; 66% LGBTQ and 20% heterosexual; 35% White, 15% Black, 9% Asian; 41% other/unknown; 25% Hispanic; mean age of 30 years (range 14–72). The majority of callers learned about the hotline by Internet search (59%). Mean exposure time prior to call was 31 hours with 57% within 24 hours. Exposures were 98% sexual; 73% anal sex (43% receptive; 30% insertive), 21% vaginal, and 6% other. 63% reported condomless sex and 29% condom failure. 15% of callers reported a partner with HIV. 35% of callers reported alcohol or recreational substances at the time of the exposure. Prior PEP and PrEP use was 20% and 9%, respectively. 91% of callers were eligible for PEP; 69% called afterhours and received a telephone PEP prescription, and 27% called during business hours and were directed to a clinic. Access to PEP within 72 hours of exposure occurred in 1,081 (93%) of eligible callers and within 36 hours in 68%. 90% of callers had confirmed follow-up clinic appointments. Of the 472 callers linked to care at the IAM, 89 (19%) transitioned to PrEP.

Conclusion. This unique program demonstrates a timely initiative to facilitate PEP access to a diverse cohort with the purpose of mitigating risk from potential exposure to HIV. Further investigation is needed to explore adherence to PEP, follow-up testing results, transitions to PrEP for prevention planning, and coordination of health care and substance use services.

Figure : PEP hotline call-flow diagram



Disclosures. **E. Kaplan-Lewis**, Viiv: Consultant, Consulting fee. **J. Aberg**, Gilead: Research Contractor, Research support. GSK: Research Contractor, Research support. ViiV: Research Contractor, Research support. **A. Urbina**, Theratechnologies: Scientific Advisor, Consulting fee. ViiV: Scientific Advisor, Consulting fee. Merck: Scientific Advisor, Consulting fee. Gilead: Scientific Advisor, Consulting fee.

861. Health Disparities in HIV and Pregnancy

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Background. HIV infection in pregnant females confers a higher risk of morbidity and obstetric complications. Widespread use of anti-retroviral therapy (ART) has dramatically decreased vertical HIV transmission. US HIV-infected pregnant females continue to be at higher risk for obstetric complications compared with nonHIV infected females. This study will be conducted with the objective to estimate the current US morbidity and mortality in HIV-infected pregnant females as well as incidence of obstetric complications in this patient population.

Methods. The National Inpatient Sample (NIS) was utilized to identify hospitalizations associated with pregnancy from 2002 to 2014. The aggregation of hospitalizations was stratified into 2 groups based on HIV status to determine whether there were differences in demographic factors, complications, and mortality. All analyses accounted for the NIS sampling design.

Results. There were 39,404,956 pregnancy-related hospitalizations identified; of which, 51,762 were also associated with a positive HIV status. There were differences in complications for those with and without HIV, which included eclampsia (1.27% vs. 0.45%; $P < 0.001$), preterm labor (11.81% vs. 6.41%; $P < 0.001$), gestational diabetes (0.92% vs. 0.38%; $P < 0.001$), group B strep (0.03% vs. <0.01%; $P < 0.001$), and Gram-negative infection (0.07% vs. 0.03%; $P = 0.013$). After adjusting for mortality risk, calendar year, age, race and ethnicity, insurance, and zip-code level income, it was found that a positive HIV status was associated with a 91.1% increased odds of mortality (95% CI: 3.9%–351.5%; $P = 0.037$).

Conclusion. As ART are readily available, we expected better outcomes for our HIV-positive pregnant females. Our results are concerning that there is such an increase rate of mortality and health disparity in HIV-positive pregnant females. As this is a retrospective study, there are limitation and further studies need to be conducted.

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862. Spatial Distribution of HIV Transmission in Ethiopia and Characteristics of HIV Clusters

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Background. HIV prevalence in Ethiopia has decreased by nearly 75% in the past 20 years with the implementation of antiretroviral therapy, but HIV transmission continues in certain high-risk regions around the country. Identification of the spatial and temporal trends of these transmission clusters, as well as their epidemiologic correlates, can lead to refinement of targeted interventions.

Methods. We used data from the 2005, 2011, and 2016 Ethiopia Demographic and Health Survey program (DHS). The spatial-temporal distribution of HIV was estimated using the Kuldorff spatial scan statistic, which determines the likelihood ratio of HIV within possible circular clusters across the country. Significant clusters ($P < 0.05$) were identified and compared based on known HIV risk factors using descriptive statistics to compare them to the noncluster area of the country. All analyses were conducted in SaTScan and R.

Results. Data from 11,383, 29,812, and 26,753 individuals with HIV were included in the 2005, 2011, and 2016 DHS, respectively. Four HIV clusters were identified consistently over the 3 time points, with the clusters representing 17% of the total population and 47% of all HIV cases. The 4 clusters were centered on the Addis Ababa, Afar, Dire Dawa/Harare, and Gambella regions, respectively. Cluster 1 is characterized by higher levels of unsafe injections (4.9% vs. 2.2%, $P < 0.001$) and high-risk occupations, such as truck drivers (5.7% vs. 1.7%, $P < 0.001$), when compared with noncluster regions, but by lower levels of transactional sex (18.6% vs. 23.0%, $P < 0.001$). Cluster 2 is also characterized by higher levels of high-risk occupations (2.8% vs. 1.7%, $P < 0.01$), whereas cluster 4 is characterized by a lower prevalence of circumcised men (59.1% vs. 91.3%, $P < 0.01$). No cluster had significantly higher levels of having more than one sexual partner in the last 12 months, although cluster 3 had a significantly lower level (0% vs. 1.7%, $P < 0.001$).

Conclusion. HIV in Ethiopia is composed of heterogeneous clusters of HIV transmission that appear to be driven by different risk factors. Further decreasing the HIV burden will likely require targeted and prioritized interventions in specific regions rather than uniform national policies.

Disclosures. **All authors:** No reported disclosures.

863. Increasing PrEP Uptake: A Diffusion-Based Network Intervention for HIV Prevention Among Young Black Men Who Have Sex With Men

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Session: 85. Preventing and Identifying New HIV Infections
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Background. Advances in biomedical prevention strategies provide new opportunities for reducing HIV incidence among young black men who have sex with men (YBMSM). Pre-exposure prophylaxis (PrEP) is for HIV-negative individuals and has been shown to be up to 99% effective in preventing HIV infection when taken as prescribed by CDC clinical practice guidelines. Several studies, however, have documented low rates of PrEP uptake among YBMSM.

Methods. PrEP Chicago is a randomized controlled trial peer leader intervention designed to promote uptake of PrEP for HIV prevention among YBMSM. Participants ($n = 423$) were recruited using respondent-driven sampling (RDS) and randomized to either an intervention ($n = 209$) or control ($n = 214$) condition. Eligibility criteria included: aged 18–35, identifies as a person of color, assigned male sex at birth, had sex with a man in the past 12 months, had an active Facebook profile, and resided in Chicago. The intervention includes a half-day, small group PrEP, and peer leader training workshop followed by monthly check-in booster calls. Approximately 12 months after their initial baseline visit, participants return to complete follow-up data collection and switch conditions, giving year 1 control participants the opportunity to learn about PrEP.

Results. The number of HIV-negative intervention participants on PrEP at baseline vs. 12-month follow-up (PrEP Chicago Study, Chicago, 2016–2018). A total of 341