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

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861. Health Disparities in HIV and Pregnancy
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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 two 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 Kulldorff spatial 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 Stata 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. 0.9%, 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 < 0.001), whereas cluster 4 is characterized by a lower prevalence of circumcised men (59.1% vs. 91.3%, P < 0.001). 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.

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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

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, identities 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.

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