1298. Acquisition of TDF-Susceptible HIV Despite High Level Adherence to Daily TDF/FTC PrEP as Measured by Dried Blood Spot (DBS) and Segmental Hair Analysis: A Case Report

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Background. Pre-exposure prophylaxis (PrEP) with emtricitabine/tenofovir (TFV) disoproxil fumarate (FTC/TDF) is highly protective against HIV infection. We report the second case of acquisition of TDF-susceptible HIV despite high adherence to PrEP, confirmed by drug level testing.

Methods. PrEP adherence was assessed by measuring FTC/TDF metabolites in dried blood spots (DBS) and FTC/TFV concentrations in segments of scalp hair. Genotypic and phenotypic resistance were evaluated. HIV partner services (PS) and HIV sequences reported to HIV surveillance with a genetic distance ≤1.5% (by HIV-Trace) identified likely transmission partners.

Results. A 21-year-old Latino man presented 13 months after PrEP initiation. He was HIV negative by rapid HIV antibody (Ab) and HIV RNA pooling (detection limit ~40 copies/mL) at PrEP initiation and at months 3, 6, and 10. At the 13-month visit, he was asymptomatic and his rapid HIV Ab was negative. Five days later, his HIV RNA was reported as positive (559 copies/mL). He was notified of the result, linked to care and immediately started antiretroviral treatment (ART), at which point his RNA was 1544 copies/mL and his HIV Ab test was positive. The HIV genotype had M184V, L74V and K103N mutations and phenotypic susceptibility to TDF. TFV/FTC levels by LC-MS/MS measured in 1 cm segments of hair collected at ART initiation indicated consistently high PrEP adherence in each of the preceding 6 months. TFV-diphosphate and FTC-triphosphate levels in DBS collected 2 days after ART initiation were 1012 fmol/punch and 0.266 pmol/punch, confirming high adherence over the preceding 6 weeks. Between PrEP initiation and HIV acquisition, he had 1 episode of urethral chlamydia and three episodes of urethral gonorrhea. The likely transmission partner, named during PS, had no history of viral suppression in HIV surveillance and harbored the same resistance mutations, with a genetic distance between the two patients of 0.66%. The partner was re-linked to care and had a current HIV RNA of 15,130 copies/mL.

Conclusion. Acquisition of TDF-susceptible HIV infection can occur despite high PrEP adherence. Quarterly HIV and STD screening of patients on PrEP, combined with prompt linkage to care and PS for those diagnosed with HIV, facilitates early diagnosis and prevents further transmission of HIV.

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1299. Iowa TelePrEP: Preliminary Experience with a Public Health-Partnered, Telemedical PrEP Delivery Model in a Rural State

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Background. Access to HIV pre-exposure prophylaxis (PrEP) is often poor in small urban and rural areas due to long distances to PrEP providers and stigma. In 2017, the Iowa Department of Public Health (IDPH), University of Iowa (UI), and community representatives collaborated to develop a public health-partnered telemedical PrEP delivery model to overcome these barriers (TelePrEP). IDPH personnel working in five sexually transmitted infection (STI) clinics and partner services (PS) programs in Eastern Iowa screened clients for PrEP indications and referred those with need to TelePrEP pharmacist providers at UI. Via collaborative practice, pharmacists completed initial and follow-up PrEP home video visits with clients on smart phones and laptops. Clients obtained laboratory monitoring and STI screening in public health-affiliated and local laboratories in accordance with USPHS/CDC guidelines, and received PrEP medication by mail. PS personnel linked TelePrEP clients with newly-identified STIs to local treatment.

Methods. Using the PrEP continuum as framework, we used IDPH databases and UI medical records to conduct a retrospective process evaluation of the TelePrEP model (February 2017–April 2018).

Results. TelePrEP received 44 referrals from public health and 59 self-referrals via advertising. Pharmacists completed 84 initial visits (81% of referrals), including 37 visits (84%) with clients referred by public health. Most (94%) started emtricitabine/tenofovir after initial visits. Retention in TelePrEP at 6 months was 87%. 96% of guideline-indicated laboratory tests (HIV, creatinine, STI, hepatitis) were completed at baseline and follow-up. Rates of extragenital chlamydia and gonorrhea screening were lower (74 of 104 completed screens) due to variable availability of swabs at local laboratories. 15 clients were diagnosed with 20 STIs on screening (6 syphilis, four gonorrhea, 10 chlamydia) and one unrecognized pregnancy was identified. PS linked all clients with STIs on screens to treatment within 14 days (80% in 3 days).

Conclusion. Using telemedicine, healthcare systems can partner with public health administered STI clinics and PS programs to create virtual PrEP delivery models in rural settings. Public health partnerships enhance client identification and ensure linkage to care for new STI diagnoses in telemedicine programs.

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1300. Young Heterosexual Men in Rural South Africa Want Access to PrEP

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Background. While many HIV prevention services in South Africa specifically support women and girls, substantial gaps exist in HIV prevention, testing and treatment services targeting men and boys. We aimed to characterize HIV prevention knowledge, sexual-risk behaviors and interest in HIV pre-exposure prophylaxis (PrEP) among young men in rural KwaZulu-Natal.

Methods. Men were identified at community settings such as taverns, fast-food restaurants, and local stores. Interviews were conducted confidentially and anonymously in Zulu, and were recorded, translated and transcribed. Transcripts were coded to identify themes.

Results. Thirty-one HIV negative men (median age 26, IQR 23–31) were interviewed, 52% with a history of STI and 77% unemployed. While most (61%) perceived themselves to be at risk for HIV, less than half had tested for HIV in the prior 3 months (36%), the majority reported inconsistent condom use (87%), and most reported partners outside their relationship (84%). While only a quarter had previously heard of PrEP, all were interested in initiating. Four participants felt PrEP should only be for men because polygamy is acceptable. While most men wanted their partners on PrEP (77%), they also felt that their female partners initiating PrEP would signify a lack of trust in the relationship, while paradoxically acknowledging that their own multiple sexual relationships put their partner at risk. Men expressed fear of destabilizing new relationships by asking about HIV status, and admitted being less likely to discuss HIV status and condoms during sexual encounters involving alcohol. Men felt that using PrEP might lead to decreased condom use and enable their female partners to be sexually active with other men. Men were concerned that if they initiated PrEP they would be mistaken as HIV positive.

Conclusion. Men in heterosexual relationships in rural South Africa acknowledge engaging in high HIV risk behaviors and feel that they should have access to PrEP. They report contradictory perspectives about their female partners accessing PrEP, and are concerned about PrEP increasing HIV risk behaviors, which needs further exploration. Heterosexual men in sub-Saharan Africa should be targeted for combination HIV prevention services, including PrEP.

Disclosures. **S. V. Shenoi**, Amgen Pharmaceuticals: Spouse does part-time contract work, Salary.

1301. Evaluation of the Rates of HIV Post-Exposure Prophylaxis Completion After the Implementation of an Automated Referral System in the Emergency Department

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Background. A 28-day regimen of Post-Exposure Prophylaxis (PEP) administered within 72 hour significantly reduces HIV infection, for both occupational and nonoccupational exposures (NOE); however, adherence to PEP for NOE has been reported to have poor rates of completion.[1] To optimize PEP referrals from our ED to our clinics, we implemented an automated referral system to maximize PEP completion and link patients to outpatient care and HIV pre-exposure prophylaxis (PrEP), if appropriate.