Table 2: Primary Outcomes by Specialty (N=381 Total Encounters)

Table 2: Primary Outcomes by Specialty (N=381 Total Encounters)			
	Non-PrEP HIV Counseling (Yes)	PrEP Discussion (Yes)	PrEP Prescription (Yes)
Family Medicine	59 (15.5%)	20 (5.2%)	7 (1.8%)
Internal Medicine	12 (3.2%)	5 (1.3%)	1 (0.3%)
Ob/Gyn	89 (23.4%)	0 (0.0%)	0 (0.0%)
Emergency Medicine	16 (4.2%)	2 (0.5%)	0 (0.0%)
Urgent Care	12 (3.1%)	1 (0.3%)	0 (0.0)
Total	**188 (49.3%)**	**28 (7.3%)**	**8 (2.1%)**

Table 3: Sexually Transmitted Infections Frequency (N=381 Total Encounters)

Table 3: Sexually Transmitted Infections Frequency (N=381 Total Encounters)	
Syphilis	39 (10.2%)
Gonorrhea	29 (7.6%)
Chlamydia	104 (27.3%)
Total Combined STIs	172 (45.1%)
Total High Risk Sexual Behavior	209 (54.9%)
Total Encounters	**381 (100%)**

Conclusion. Our findings demonstrate that the percent of individuals newly prescribed PrEP (2.1%) at HUMC and affiliated clinics is less than that reported nationally and in California. This suggests that municipal health systems fall short in PrEP usage, notably for structurally vulnerable populations such as racial minorities as well as heterosexual females. Ending racial/ethnic disparities in HIV and in PrEP coverage not only requires educating specialty providers on PrEP, but also addressing structural racism and identifying structural barriers to care in vulnerable communities.

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

998. Understanding Retention in PrEP Care in the South: Insights from an Academic HIV Prevention Clinic

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Session: P-46. HIV: Prevention

Background. Daily emtricitabine-tenofovir disoproxil fumarate has emerged as one of the most effective tools to prevent HIV transmission. However, it remains poorly utilized in the South. We report on PrEP retention in care and sexually transmitted infections (STIs) in a large academic PrEP clinic in Durham, North Carolina.

Methods. We conducted a retrospective chart review of patients in the Duke University PrEP Clinic from Jan. 1, 2015 through Oct. 15, 2019. Short-term retention in care was completion of a 3 month (mo) follow up as per CDC guidelines. Long-term retention was defined as completion of a 3 mo visit and an additional visit between 8 and 12 mo. Baseline STI was defined as a diagnosis at or within 1 year prior to initial PrEP visit. STI diagnosis while on PrEP was any subsequent diagnosis while retained in care. Odds ratios (OR) were generated using multivariable logistic regression. Kaplan-Meier curves were generated for retention in care and compared using the log rank test.

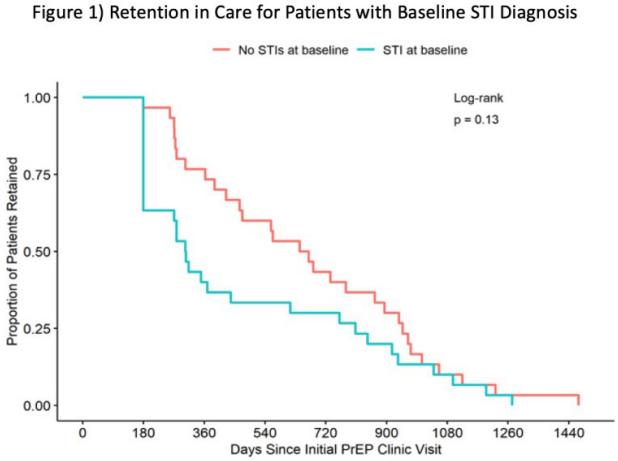
Results. A total of 255 patients attended at least one PrEP clinic encounter; 89% were men, 37% were Black, and 73% identified as men who have sex with men (MSM); 153 (60%) returned for at least one follow-up visit. Short and long term retention in care were met by 130/237 (55%) and 80/217 (37%) patients respectively. OR for retention are reported in Table 1. MSM are more likely to be retained in the short-term (OR 5.22 [95% confidence interval (CI) 1.57-17.32]). Self-referred patients were more likely to be retained in the long-term (OR 2.18 [95% CI 1.12-4.23]). Patients without insurance were less likely to attain long-term retention in care outcomes (OR 0.32 [95% CI 0.11-0.91]). STI diagnoses include 30 (12%) patients for a total of 42 unique infections at baseline and 44 (17%) for a total of 69 unique infections at follow up. Two new HIV diagnoses were made at first PrEP clinic encounter with no new diagnoses made at follow-up. Baseline STI was not associated with retention in care over time with disengagement defined as 6 mo post last visit (Figure 1).

Table 1) Odds Ratios of Retention in Care at 3 and 12 Months

Table 1) Odds Ratios of Retention in Care at 3 and 12 Months

Variable	Short Term Retention (3 Months) OR (95% CI)	Long Term Retention (12 Months) OR (95% CI)
Female	2.81 (0.73-10.8)	0.17 (0.01-1.48)
Black	0.81 (0.45-1.46)	0.83 (0.39-1.79)
Hispanic	1.42 (0.42-4.76)	0.96 (0.22-4.11)
MSM	**5.22 (1.57-17.32)**	1.46 (0.39-5.37)
No Insurance	0.50 (0.25-1.02)	**0.32 (0.11-0.91)**
Self-referred	1.18 (0.67-2.07)	**2.18 (1.12-4.23)**
HIV Positive Partner	0.89 (0.44-1.78)	1.66 (0.72-3.85)
35 and Under	0.87 (0.50-1.52)	0.59 (0.30-1.13)
Baseline STI	0.81 (0.35-1.86)	1.95 (0.73-5.18)

Figure 1) Retention in Care for Patients with Baseline STI Diagnosis.



Conclusion. Our PrEP clinic shows a decline in patient retention over time. STIs were also prevalent, reinforcing that frequent STI testing and counseling should be part of each PrEP encounter. Further investigations into how to increase and improve PrEP utilization for HIV prevention are needed.

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

999. Using the F/TDF Adherence-Efficacy Relationship to Calculate Background HIV incidence: Results from the DISCOVER trial

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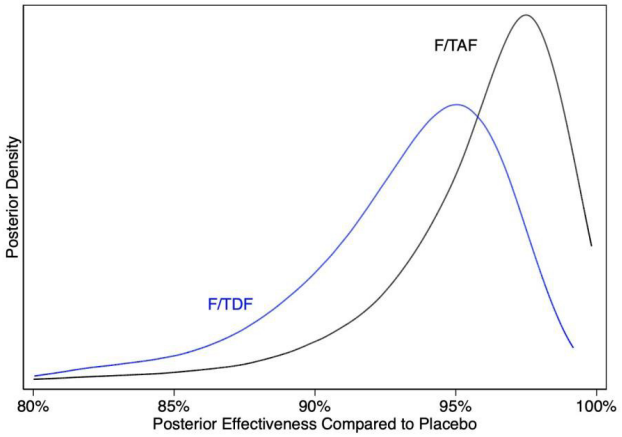
Session: P-46. HIV: Prevention

Background. RRandomized trials of new PrEP agents compare to oral emtricitabine+tenofovir disoproxil fumarate (F/TDF) and do not have a placebo arm. We used the well-characterized adherence-efficacy relationship for F/TDF from iPrEX OLE, to back-calculate the (non-PrEP) background HIV incidence (bHIV) in the F/TDF arm of DISCOVER and estimate comparative efficacy (to bHIV).

Methods. TDISCOVER is an ongoing randomized active-controlled trial in 5,387 men who have sex with men and transgender women that demonstrated non-inferiority of F+tenofovir alafenamide (F/TAF) to F/TDF (IRR 0.47 (95% CI 0.19, 1.15). TFV-DP levels in DBS were assessed for all diagnosed with HIV and in a randomized subset of 10%. We used a Bayesian model with a prior distribution, derived from iPrEx OLE, relating TFV-DP levels to HIV prevention efficacy: eg TFV-DP levels of < 350 (low), 350 to < 700 (medium) and ≥700 (high) fmol/punch were assumed to provide 0%, 86% and 98% HIV protection, respectively. This prior, combined with F/TDF seroconversion rate and TFV-DP levels, yields Bayesian inferences on the bHIV. In R, STAN was used to sample 10,000 realizations from the posterior distribution.

Results. There were 6 vs. 11 post-baseline HIV infections (0.14 v. 0.25 per 100 person-years [PY]) on F/TAF and F/TDF. Of the 11 on F/TDF, 10 had low, 0 had medium, and 1 had high TFV-DP levels; among HIV-negative controls, 5% of the person-time had low, 9% had medium, and 86% had high TFV-DP levels. A non-informative prior distribution for bHIV, combined with the prior for TFV-DP level-efficacy relationship, yielded a posterior bHIV incidence [0.80 Bayesian credible interval (CrI)] of 3.4/100 [1.9, 6.0/100] PY; which suggests a median F/TAF efficacy [0.95 CrI] of 96% [88%,99%] and 93% [87%,96%] for F/TDF compared to bHIV. If we chose a conservative prior distribution for bHIV of 1.0/100 PY, the model yields a median posterior bHIV [0.80 CrI] of 2.8/100 [1.7, 4.7/100] PY; which suggests a median efficacy [0.95 Cr] of 95% [86%, 99%] for F/TAF and 92% [86%, 67%] for F/TDF compared to bHIV with corresponding number of HIV infections averted of 117 and 114, respectively (Figure).

Figure.



Conclusion. The F/TDF adherence-efficacy relationship can be used to back-calculate bHIV incidence in MSM/TW PrEP trials and assess the efficacy of new PrEP agents compared to bHIV.

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1000. HIV and the Treatment-Experienced Patient: The Positive Impact of Case-Based Education on Physicians' Competence and Confidence

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Session: P-47. HIV: Treatment

Background. Despite therapeutic advances, treatment-experienced HIV patients can present a clinical challenge, even to experienced care providers.

Table. Assessment of Educational Effectiveness

Area of Assessment	% relative improvement (% of ID specialists selecting the correct response at pre- vs post-assessment)	*P*-value for change	Cramer's V for the magnitude of the change
Timely modification of ART based on patients' declining renal function and presence of osteopenia	71% improvement (55% vs 94%)	*P*<.0001	V=.446 (Extensive)
Incorporating patient preferences and priorities into clinical decision-making	107% improvement (43% vs 89%)	*P*<.0001	V=.489 (Extensive)
Selection of ARVs with a high barrier of resistance for individuals who have a history of inconsistent engagement in care	8.3% improvement (84% vs 91%)	*P*=NS	V=NS

Methods. This study assessed the ability of digital education to improve HIV/ID specialists' ability to develop tailored strategies for treatment-experienced patients. A CME/ABIM MOC/CE-certified, case-based, educational program was developed. Modeled after the interactive grand rounds approach, a "test then teach" strategy with multiple choice questions was used to elicit cognitive dissonance. Evidence-based feedback was provided following each response. Educational effectiveness was assessed with a repeated-pairs pre-/post-assessment study design; each individual served as his/her own control. A chi-square test assessed changes pre- to post-assessment. *P* values < 0.05 are statistically significant. Effect sizes were evaluated using Cramer's V (< 0.05 modest; 0.06-0.15 noticeable effect; 0.16-0.26 considerable effect; > 0.26 extensive effect). The activity launched on a website dedicated to continuous professional development on 09/12/19. Data for this matched-learner analysis were collected through 11/06/19.

Results. To date, 14,181 HCPs (3128 physicians; 9518 nurses/NPs; 333 PAs; 172 pharmacists) have participated in the activity. Data from the subset of HIV/ID specialists (n=110) who answered all pre-/post-assessment questions during the initial study period were analyzed. Following activity participation, significant improvements were observed in the proportion of HIV/ID specialists who answered all assessment questions correctly (15% pre vs 81% post; $P < .0001$; V=.356). Improvements were also observed in several specific areas of assessment (Table). Additionally, 44% of HIV/ID specialists indicated they planned to modify their treatment approach for treatment experience patients because of participating in the education.Of note, this assessment also identified topics in which HIV/ID had a high degree of baseline knowledge.

Conclusion. Participation in this online, interactive, case-based, program significantly improved HIV/ID specialists' ability to develop individualized care strategies for patients who are treatment experienced.

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1001. HIV RNA monitoring after hospitalization for non-HIV-related illness in patients on combination antiretroviral therapy prior to admission

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Session: P-47. HIV: Treatment

Background. Hospitalization presents risk for loss of virologic suppression (VS) in people living with HIV (PLWH) due to issues with combination antiretroviral therapy (cART). cART medication errors or drug-drug interactions with new maintenance medications may lead to loss of VS. Appropriate monitoring of HIV RNA post-discharge to ensure ongoing VS may not occur following non-HIV-related illnesses. The objective of this multi-center study was to describe HIV RNA monitoring and VS in PLWH following hospitalization for non-HIV-related illnesses.

Methods. PLWH at least 18 years old with a CD4 count >200 cells/mm^3 on cART prior to admission, hospitalized for 24 hours or more at either of two large, academic medical centers (where they also attended follow-up clinic visits) for a non-HIV-related illness, and that survived to hospital discharge between January 1st 2010 and December 31st 2015 were eligible for analysis. The primary outcome was the presence of an HIV RNA measurement as recommended by national guidelines within 6 months of hospital discharge. Secondary outcomes included the incidence of transient viremia and loss of VS after discharge.

Results. A total of 329 patients were included. The median age was 51 years (interquartile range [IQR] 44-58), 76.6% were male, and 48.3% were African American. The median CD4 count was 484 cells/mm^3 (IQR 357-629) and 85.4% (n=281) had an undetectable HIV RNA prior to admission. Among the 97.6% (n=321) of patients with an HIV RNA measurement after hospital discharge, the median time to HIV RNA measurement was 2.4 months (IQR=1.2-4.1) and 86.3% (n=284) had an HIV RNA measurement within 6 months. Among patients who were undetectable prior to admission, transient viremia after discharge occurred in 7.1% (n=20) within a median of 2.5 months (IQR 1.3-4.1) and 4 of these patients lost VS. Three of the four patients with loss of VS were admitted for a non-HIV-related infection and all were on protease inhibitor-based regimens.

Conclusion. HIV RNA monitoring appears to occur according to guideline recommendations in the majority of PLWH after hospitalization for a non-HIV-related illness. Despite the occurrence of transient viremia, loss of VS was rare. Future studies should focus on risk factors for loss of VS.

Disclosures. Milena M. Murray, PharmD, MSc, BCIDP, AAHIVP, Merck (Speaker's Bureau)

1002. A Daily Single Tablet Regimen (STR) of Bictegravir/Emtricitabine/Tenofovir Alafenamide (B/F/TAF) in Virologically-Suppressed Adults Living with HIV and End Stage Renal Disease on Chronic Hemodialysis

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Session: P-47. HIV: Treatment

Background. Treatment for people living with HIV (PLWH) and end stage renal disease (ESRD) on hemodialysis (HD) has previously required complex dose-adjusted regimens. We evaluated a daily regimen of elvitegravir/cobicistat/emtricitabine/tenofovir alafenamide (E/C/F/TAF) and established this treatment as effective and safe, showing that daily TAF resulted in lower plasma tenofovir exposure than a historical comparison of once weekly tenofovir disoproxil fumarate in patients with ESRD on