Prescription Adherence and Persistence on Oral Pre-exposure Prophylaxis (PrEP) Among Prep-naive (PN) Individuals After FTC/TAF Approval in the United States (US)

P009

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BACKGROUND

- We evaluated utilization of emtricitabine/tenofovir disoproxil fumarate or tenofovir alafenamide (F/TDF, F/TAF) among PN after the approval of F/TAF for PrEP in the US.

METHODS

- EMR and dispensing data from Trio Health were used for this retrospective observational study.
- The study included HIV-negative PN ≥ 18 years with first dispense of daily oral PrEP (≥30-day supply) between 10/19-5/21 followed for ≥6 months; individuals with HBV or post-exposure prophylaxis were excluded.
- Prescription adherence, measured as proportion of days covered (PDC; mean and proportion with PDC ≥50, 70, and 80%) and time to regimen discontinuation (no drug >3 months) or switch (TRD; Kaplan-Meier analysis) were compared between regimens.
- Characteristics associated with higher PDC and time to first regimen stop (switch/discontinuation) were evaluated using generalized linear regression and cox proportional hazard models, respectively.

RESULTS

- Of 1330 PrEP starts, 86% (1144) were dispensed F/TAF vs 14% F/TDF (186). Baseline characteristics differed by regimen [Table].
- While PDC was similar for both regimens, F/TAF had higher number of dispenses and mean days supplied vs F/TDF; mean days of follow-up were similar.
- F/TAF users had longer TRD (mean 20.2 vs 8.5 months, Log-rank p<.001); median TRD was 3.9 months for F/TDF and not reached for F/TAF [Figure 1].
- A higher proportion of PN on F/TDF discontinued (46% vs 24% F/TAF) and switched (26% vs 2% F/TAF) regimen (both p<.001).
- After accounting for gender, race, payer, age, sexual behavior, F/TDF had a higher risk of discontinuation or switch (HR=4.9 CI 3.9-6.2); Black race was also associated with higher risk of discontinuation or switch (HR=1.8 CI 1.4-2.4) [Figure 2].
- HR results were similar when considering only discontinuation (censoring at time of switch or loss to follow up).
- Older age was identified as the primary driver of PDC controlling for other factors (age 26-50 RR=1.05 CI 1.01-1.1, age>50 RR=1.09 CI 1.03-1.14, reference age 18-25) [Figure 3].

CONCLUSIONS

- In this study PN adults dispensed F/TAF had greater number of dispenses, mean days supplied, and were less likely to discontinue or switch from F/TAF compared to F/TDF.
- Older age was the primary driver of increased PDC when considering other factors, including demographics, insurance and regimen. Additional analyses would consider evaluating individuals restarting the same regimen.

Table. Characteristics of Individuals Dispensed Oral PrEP After October 2019

n (%) unless specified	PrEP-naive (n=1330)	
	FTC/TDF n=186	FTC/TAF n=1144
Male	100 (54)	760 (66) †
Female	19 (10) #	12 (1)
Transgender	0 (0)	1 (0)
Unspecified	67 (36)	371 (32)
White Race	79 (42)	699 (61) #
Black	19 (10)	124 (11)
Asian, Indian, Pacific Islander	13 (7)	91 (8)
Unspecified	75 (40) #	230 (20)
Commercial Insurance	97 (52)	735 (64) *
Medicare	2 (1)	26 (2)
Medicaid	19 (10) *	72 (6)
Ryan White	0 (0)	3 (0)
Other non-commercial plan or self-pay	6 (3)	24 (2)
Unknown	62 (33) *	284 (25)
Age 18-25 years	30 (16)	139 (12)
Age 26-50 years	133 (72)	816 (71)
Age 51+ years	23 (12)	189 (17)
Sexual behavior (based on ICD-10 codes)[1]	115 (62)	862 (75) #
Outcomes		
PDC[2] (%), mean (SD)	87.2 (19.8)	86.3 (17.3)
Number of dispenses, mean (SD)	4.5 (3.9)	9.9 (6.2) #
Days supplied, mean (SD)	141.9 (122.7)	311.5 (189.2) #
Follow up months, mean (SD)	15.1 (6.3)	14.7 (5.8)
PDC >50%	171 (92)	1083 (95)
PDC >70%	160 (86)	962 (84)
PDC >80%	140 (75)	863 (75)

*p<0.05; †p=0.001; #p<0.001 FTC/TDF vs FTC/TAF.

[1] Sexual behavior: ICD-10 codes for "high-risk" sexual behavior or exposure to communicable diseases.

[2] Proportion days covered.

Figure 1. Time to PrEP Regimen Discontinuation or Switch (TRD, months)

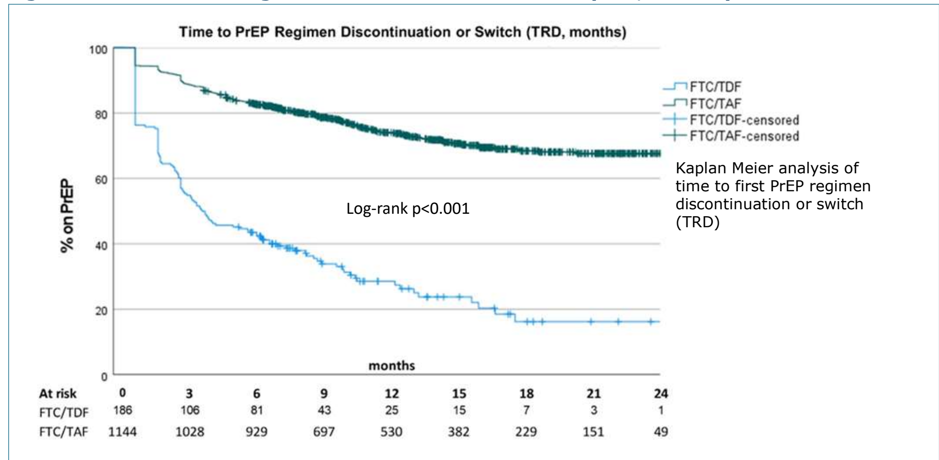


Figure 2. Risk of First Oral PrEP Regimen Discontinuation or Switch

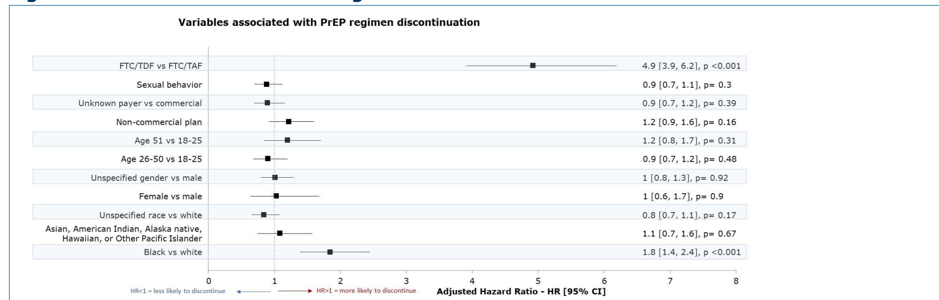
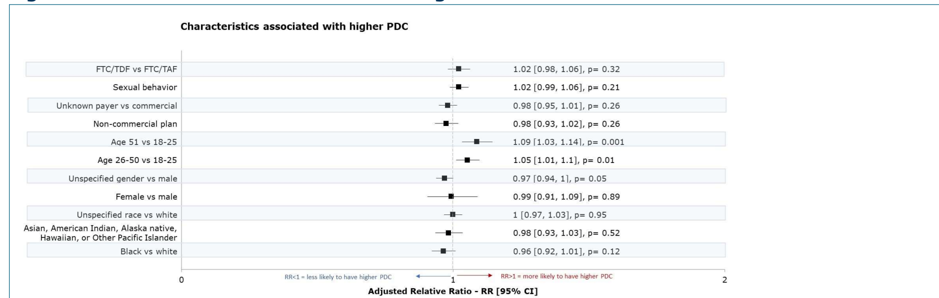


Figure 3. Characteristics associated with higher PDC



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