

Understanding Real-World Utilization of Pre-Exposure Prophylaxis (PrEP): Data from Trio Health HIV Research Network



Janna Radtchenko, MBA¹, Rick Elion, MD²

¹Trio Health, Louisville, CO, USA; ²George Washington University School of Medicine, Washington, DC and Trio Health, Louisville, CO, USA

BACKGROUND AND METHODS

In February 2019, the US Department of Health and Human Services proposed a strategic initiative to end human immunodeficiency (HIV) epidemic in the US by reducing new HIV infections by 90% in 2020–2030. One of the 4 pillars of the initiative is protecting persons at risk for HIV infection using HIV PrEP (antiretrovirals proven effective at preventing infection among persons at risk). We investigated PrEP uptake, adherence, and duration of PrEP use among patients in care at 11 large geographically distributed US HIV treatment centers.

Trio Health HIV Research Network containing electronic medical records for over 500,000 HIV and non-HIV patients was used for the study. PrEP patient registry contains over 10,000 patients with PrEP prescriptions and over 6,000 with PrEP dispenses. Adults (age≥18) with dispenses for PrEP regimens were selected for this analysis.

TABLE 1: PATIENT CHARACTERISTICS

no (%) unless indicated	PrEP N=5997*	A: FTC/TDF n=4790	B: FTC/TAF n=2917	C: FTC/TDF + FTC/TAF n=94	p-values <0.05 are shown		
					A vs B	A vs C	B vs C
Age - mean (SD)	36.2 (11.2)	36 (11.1)	38.6 (11.2)	41.5 (11.5)	<0.001	<0.001	0.040
Follow-up since regimen initiation - months, mean (SD)	19.6 (16)	22.5 (16.4)	10.2 (5.2)	12.7 (5)	<0.001	<0.001	
Gender							
Male	4067 (68)	3287 (69)	2059 (71)	62 (66)			
Female	230 (4)	217 (5)	18 (1)	2 (2)	<0.001		
Transgender	5 (0)	5 (0)	1 (0)	0 (0)			
Unspecified	1695 (28)	1281 (27)	839 (29)	30 (32)			
Race							
White	3506 (58)	2812 (59)	1834 (63)	61 (65)	0.001		
Black	732 (12)	599 (13)	243 (8)	8 (9)	<0.001		
Other	634 (11)	535 (11)	280 (10)	10 (11)			
Unspecified	1125 (19)	844 (18)	560 (19)	15 (16)			
Region							
Central	201 (3)	186 (4)	25 (1)	0 (0)	<0.001		
Northeast	339 (6)	338 (7)	1 (0)	0 (0)	<0.001		
South	3095 (52)	2414 (50)	1628 (56)	53 (56)	<0.001		
West	2362 (39)	1852 (39)	1263 (43)	41 (44)	<0.001		
Prior PrEP regimens, mean (SD)	0.2 (0.4)	0 (0.2) n=4790	0.6 (0.5)	0.9 (0.5)	<0.001	<0.001	0.046

*Unique patients. Patients with multiple PrEP regimens will be counted for each regimen.

RESULTS AND CONCLUSIONS

Of 5,997 adults with PrEP dispenses, 68% were male, 4% female, <1% transgender, and 28% unspecified gender; 58% were white, 12% black, 11% other race, 19% unknown; 85% were age <50 at PrEP initiation. Emtricitabine/tenofovir disoproxil fumarate (FTC/TDF) was dispensed to 80% of PrEP patients, FTC/tenofovir alafenamide (TAF) to 49%, 2% received alternating FTC/TDF and FTC/TAF. Average PrEP regimen duration was 11 mo (SD 10.1): 12.2 mo (12.0) FTC/TDF, 9.0 mo (5.4) FTC/TAF, and 11.6 (5.7) alternating FTC/TDF and FTC/TAF. Average medication possession ratio (MPR) was 87.3% (SD 17.6): 86.3% (18.6) for FTC/TDF, 90% (14.4) for FTC/TAF, 51.9% (11.7) for alternating FTC/TDF and FTC/TAF.

Trio Health HIV Research Network is dynamic data collection that provides insight into patterns of PrEP prescribing and dispensing, patient experience and adherence, longitudinal changes in comorbidities and laboratory values, frequency and time to seroconversion. Continued collection and analyses of patient data will broaden PrEP awareness and optimize patient outcomes.

FIGURE 1: DURATION OF PREP THERAPY (MONTHS)

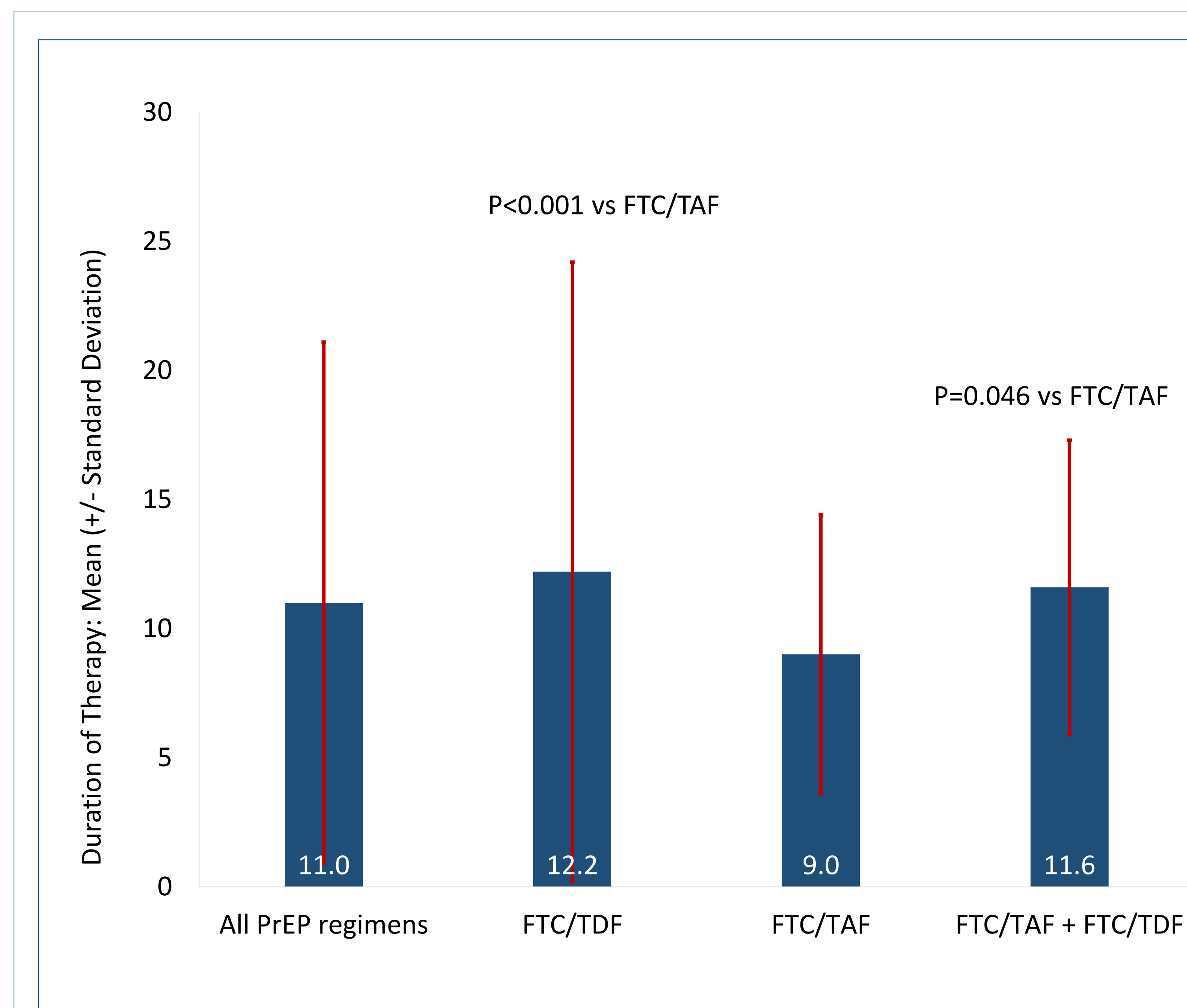


FIGURE 2: ADHERENCE (MEDICATION POSSESSION RATIO - MPR)

