

High interest in long-acting injectable HIV pre-exposure prophylaxis among nationwide online sample of United States men who have sex with men, 2019

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Conflict Statement : Study was conducted with financial and technical support from ViiV Healthcare, a pharmaceutical company that is developing a long-acting injectable HIV pre-exposure prophylaxis medication.

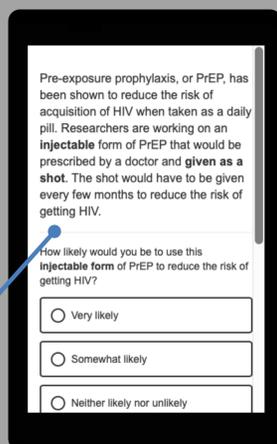
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Background

- Daily oral HIV pre-exposure prophylaxis (DO-PrEP) has been available in the US since 2012, but less than 20% of US men who have sex with men (MSM) who can benefit from PrEP are currently using it ¹
- Some barriers to PrEP uptake and adherence may be addressable with new administration modes
- In mid-2020, clinical trial (HPTN 083) showed that cabotegravir, a long-acting injectable PrEP (LAI-PrEP) was superior to TDF/FTC at preventing HIV²
- As with DO-PrEP, achieving population-level effectiveness of LAI-PrEP will require equitable uptake
- Understanding variations in willingness to use LAI-PrEP among MSM will identify where disparities in uptake could occur

Methods

- American Men's Internet Survey (AMIS) is an ongoing annual HIV behavioral surveillance survey of United States MSM³
- Eligibility – US resident, 15+ years, cis-male, had sex with male in past 12 months, not reported a previous HIV diagnosis
- Beginning in 2019, began assessing LAI-PrEP interest in preparation for market availability and monitoring future uptake
- LAI-PrEP briefly introduced and a Likert-scale question was asked about likelihood of use



- Factors considered:
 - Demographics
 - Condomless anal sex
 - Number/type of male partner
 - STI diagnoses
 - Recreational drug use
 - Daily oral PrEP interest, use, and discontinuation
- Multivariable ordinal regression of increased likelihood of using LAI-PrEP (Some PrEP covariates not asked of everyone and not used in modeling)

Results

Study Population Key Facts:



- 2,489 MSM participants
- One third were non-White
- Majority under age 30
- Majority lived outside of urban areas

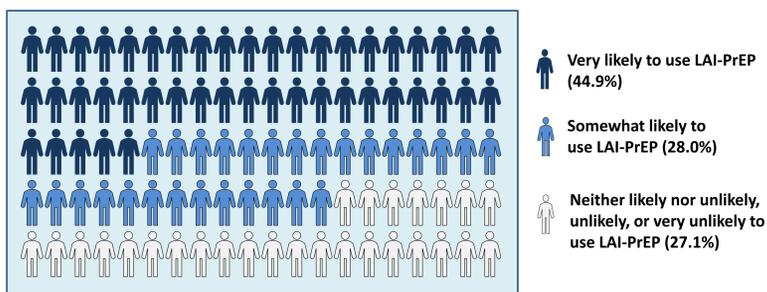


- 82% had never used daily oral (DO) PrEP
- 15% currently using DO-PrEP
- 21% discontinued DO-PrEP in past year
- 6% took <15 doses DO-PrEP in past month
- 69% not on DO-PrEP were willing to use it

Likelihood of LAI-PrEP Use Significantly Greater Among:

- Black MSM (compared to White)
- MSM who had condomless anal sex with male partner
- Current DO-PrEP users (compared to never PrEP users)
- Never PrEP users who were also willing to use DO-PrEP

Overall Likelihood to use LAI-PrEP



Likelihood of Using LAI-PrEP (%) by DO-PrEP Status

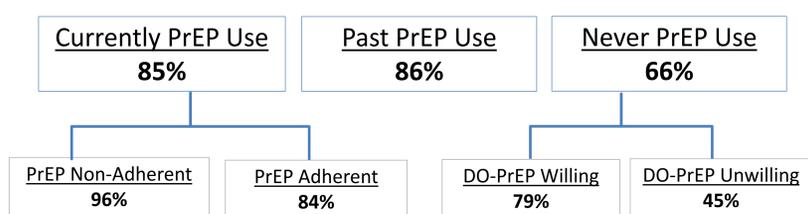


Table 1. Likelihood of using long-acting injectable HIV pre-exposure prophylaxis among 2,489 US men who have sex with men, 2019

	N (%)	Very likely n (%)	Somewhat likely n (%)	Neither likely or unlikely n (%)	Somewhat unlikely n (%)	Very unlikely n (%)	Odds ratio (95% CI)	Adjusted odds ratio (95% CI)
Age								
15-24	1081 (43.4)	458 (42.4)	324 (30.0)	110 (10.2)	89 (8.2)	100 (9.3)	0.96 (0.80, 1.17)	
25-29	517 (20.8)	242 (46.8)	142 (27.5)	41 (7.9)	36 (7.0)	56 (10.8)	1.20 (0.96, 1.50)	
30-39	365 (14.7)	187 (51.2)	81 (22.2)	40 (11.0)	19 (5.2)	38 (10.4)	1.27 (0.99, 1.62)	
40 and older	526 (21.1)	231 (43.9)	149 (28.3)	63 (12.0)	29 (5.5)	54 (10.3)	REF	
Race/Ethnicity								
Black, non-Hispanic	278 (11.2)	149 (53.6)	65 (23.4)	24 (8.6)	13 (4.7)	27 (9.7)	1.30 (1.03, 1.65)	1.27 (1.00, 1.62)
Hispanic	400 (16.1)	194 (48.5)	106 (26.5)	38 (9.5)	32 (8.0)	30 (7.5)	1.04 (0.85, 1.27)	1.03 (0.84, 1.27)
Other or multiple races	206 (8.3)	88 (42.7)	60 (29.1)	28 (13.6)	13 (6.3)	17 (8.3)	0.84 (0.64, 1.10)	0.85 (0.65, 1.11)
White, non-Hispanic	1567 (63.0)	667 (42.6)	458 (29.2)	159 (10.1)	114 (7.3)	169 (10.8)	REF	REF
Urbanicity								
Urban	966 (38.8)	451 (46.7)	262 (27.1)	97 (10.0)	72 (7.5)	84 (8.7)	REF	
Suburban	530 (21.3)	234 (44.2)	151 (28.5)	57 (10.8)	36 (6.8)	52 (9.8)	0.96 (0.79, 1.17)	
Small/medium metro	764 (30.7)	335 (43.8)	211 (27.6)	84 (11.0)	48 (6.3)	86 (11.3)	1.01 (0.85, 1.21)	
Rural	223 (9.0)	94 (42.2)	71 (31.8)	16 (7.2)	16 (7.2)	26 (11.7)	1.04 (0.80, 1.36)	
Condomless anal sex in past 12 months								
Yes	1813 (72.8)	871 (48.0)	490 (27.0)	156 (8.6)	114 (6.3)	182 (10.0)	1.50 (1.27, 1.76)	1.43 (1.21, 1.69)
No	676 (27.2)	247 (36.5)	206 (30.5)	98 (14.5)	59 (8.7)	66 (9.8)	REF	REF
Male sex partners in past 12 months								
Two or more	1741 (69.9)	848 (48.7)	502 (28.8)	137 (7.9)	106 (6.1)	148 (8.5)	1.21 (0.99, 1.49)	
One	374 (15.0)	124 (33.2)	87 (23.3)	69 (18.4)	32 (8.6)	62 (16.6)	REF	
Male partner type in past 12 months								
Casual only	900 (36.2)	408 (45.3)	253 (28.1)	90 (10.0)	67 (7.4)	82 (9.1)	1.09 (0.89, 1.34)	
Main and casual	1009 (40.5)	486 (48.2)	304 (30.1)	79 (7.8)	59 (5.8)	81 (8.0)	1.14 (0.93, 1.39)	
Main only	479 (19.2)	165 (34.4)	122 (25.5)	78 (16.3)	39 (8.1)	75 (15.7)	REF	
STI diagnosis in past 12 months								
Yes	336 (13.5)	195 (58.0)	80 (23.8)	16 (4.8)	22 (6.5)	23 (6.8)	1.39 (1.13, 1.73)	1.14 (0.91, 1.43)
No	2153 (86.5)	923 (42.9)	616 (28.6)	238 (11.1)	151 (7.0)	225 (10.5)	REF	REF
Illicit drugs in past 12 months								
Yes	977 (39.3)	463 (47.4)	257 (26.3)	90 (9.2)	69 (7.1)	98 (10.0)	1.16 (1.00, 1.35)	1.12 (0.96, 1.30)
No	1512 (60.7)	655 (43.3)	439 (29.0)	164 (10.8)	104 (6.9)	150 (9.9)	REF	REF
Daily oral PrEP use								
None	2031 (81.6)	774 (38.1)	570 (28.1)	229 (11.3)	149 (7.3)	220 (10.8)	REF	REF
Current	383 (15.4)	244 (63.7)	80 (20.9)	16 (4.2)	21 (5.5)	17 (4.4)	1.56 (1.27, 1.92)	1.39 (1.11, 1.72)
Past	161 (6.5)	95 (59.0)	43 (26.7)	8 (5.0)	2 (1.2)	10 (6.2)	1.44 (1.06, 1.94)	1.32 (0.97, 1.79)
Willing to take daily oral PrEP^a								
Yes	1457 (69.4)	723 (49.6)	428 (29.4)	115 (7.9)	81 (5.6)	87 (6.0)	REF	
No	643 (30.6)	92 (14.3)	158 (24.6)	118 (18.4)	69 (10.7)	138 (21.5)	0.76 (0.64, 0.90)	
Daily oral PrEP adherence^b								
<15 doses past month	23 (6.1)	15 (65.2)	7 (30.4)	0 (0.0)	1 (4.3)	0 (0.0)	REF	
16+ doses past month	356 (93.9)	227 (63.8)	71 (19.9)	16 (4.5)	20 (5.6)	17 (4.8)	1.29 (0.56, 2.99)	
Daily oral PrEP discontinuation in past 12 months^c								
Yes	101 (20.9)	57 (56.4)	28 (27.7)	5 (5.0)	2 (2.0)	6 (5.9)	0.83 (0.53, 1.28)	
No	383 (79.1)	244 (63.7)	80 (20.9)	16 (4.2)	21 (5.5)	17 (4.4)	REF	

LAI = long-acting injectable; PrEP = HIV pre-exposure prophylaxis; CI = confidence interval; STI = sexually transmitted infection
 Bold indicates significance at p<0.05
^a Among those who have never taken daily oral PrEP
^b Among those who were currently taking daily oral PrEP
^c Among those who had taken daily oral PrEP in the past 12 months

Discussion

- Interest in LAI-PrEP is consistently high among US MSM, particularly among some in disproportionately affected populations
- Though interest in LAI-PrEP varied by experiences with daily oral PrEP, interest was also high among those who were PrEP naïve, indicating the potential for this new PrEP modality to increase MSM engagement in biomedical HIV prevention
- Monitoring of LAI-PrEP interest and exploring factors that could increase interest will be important to LAI-PrEP uptake
- A discrete choice experiment exploring preferences for LAI-PrEP was also conducted with these participants, and findings are presented at IAS-2021 by Dr. S Wilson Beckham:
 - A-IAS2021-00800 - "Preferences for implementing long-acting injectable pre-exposure prophylaxis among cisgender MSM in the US"
 - A-IAS2021-00700 - "Variation in preferences for long-acting injectable PrEP among US MSM: a latent class analysis"

References

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