Willingness to Use Pre-Exposure Prophylaxis Among Community-Recruited Injection Drug Users

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BACKGROUND

- The use of antiretrovirals (ARVs) as pre-exposure prophylaxis (PrEP) has been shown to be effective in reducing the risk of HIV transmission among men who have sex with men[1] and heterosexual couples.[2]
- Recent research suggests that PrEP is also effective with injection drug user (IDU) populations.[3]
- However, the willingness to use PrEP has not been fully assessed among IDU populations, particularly in Washington, DC.
- Washington, DC has a generalized HIV epidemic with a 2.4% prevalence[4] and also has a large IDU population; given these factors, PrEP has the potential to make a significant impact in reducing HIV incidence.
- In anticipation of possible PrEP use among IDUs, we assessed the willingness to take PrEP to prevent HIV transmission among a community-based sample of IDUs in Washington, DC.

OBJECTIVE

- To assess the self-reported willingness to use PrEP among community-recruited injection drug users.

METHODS

- Data from the third injection drug user cycle (IDU-3) of the CDC-sponsored National Behavioral Surveillance (NHBS) System in Washington, DC were used.
- Between August and November 2012, a community-based sample of IDUs were recruited using respondent driven sampling (RDS).
- Eligibility criteria for inclusion in NHBS included 1) having injected drugs in the past 12 months, 2) being 18 years old or older, 3) being able to complete the survey in English or Spanish, and 4) residing in the DC metropolitan statistical area.
- For this **analysis**, only HIV-negative IDUs (n=304) who responded to this question were included.
- Behavioral data were collected using an interviewer-administered survey. Questions assessed demographics, drug use and sexual risk behaviors.
- Willingness to take PrEP was measured by providing a brief description of what PrEP is and asking, "*If PrEP was available for free in DC, how likely would you be to take it?*" Potential responses were "*very likely*," "*somewhat likely*," and "*not at all likely*."
- Univariate, bivariate and multivariate analyses were conducted applying weights generated using RDS Analysis Tool (v. 7.1.46). All statistical analyses were conducted using SAS v9.3.

Table 1: Demographic characteristics (N=304)

Characteristic	N	Weighted %
Gender		
Male	203	68.0
Female	98	30.6
Transgender	3	1.5
Age (years)		
<50	76	17.3
50+	228	82.7
Race/Ethnicity		
Black	294	97.2
Non-Black	10	2.8
Marital Status		
Married or living together	61	23.2
Separated, divorced, widowed	107	33.2
Never been married	136	43.7
Sexual Orientation		
Heterosexual	269	84.2
Bisexual	28	10.9
Homosexual	7	4.9
Educational Attainment		
Less than high school graduate	102	30.7
High school graduate/GED+	201	69.3
Employment Status		
Working/student/homemaker (FT, PT)	48	29.1
Retired or disabled	122	36.2
Unemployed	134	34.7
Yearly Household Income		
$0 to $9,999	183	56.6
$10,000 to $19,999	74	32.6
$20,000+	36	10.8
Housing		
Formerly homeless	38	14.2
Currently homeless	86	30.0
Never homeless	180	55.7
Correctional history		
Ever been to jail, prison, or juvenile detention	266	81.1
Injection Frequency, last year		
Daily	229	59.6
Weekly	48	19.6
Less than weekly	27	20.8

Figure 1: Response to question, "If PrEP were available for free in DC, how likely would you be to take it?" (N=304)

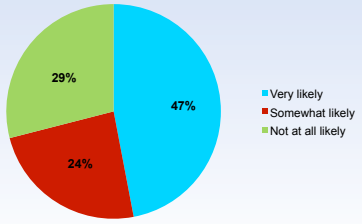


Table 2. Self-reported willingness to use PrEP by various characteristics (N=304)

Characteristic	Very likely to use PrEP n=142 (46.7%)	Somewhat/ not likely to use PrEP n=162 (53.3%)	OR (95% CI)	P-value
Gender (male)	61.3%	72.5%	0.59 (0.26, 1.34)	0.20
Age (years)				
<50	36.8%	16.3%	***3.30 (1.41, 7.75)***	***0.006***
50+	63.2%	83.7%	1.00 (--)	--
Marital Status				
Married or living together	17.9%	29.1%	1.00 (--)	--
Separated, divorced, widowed	33.3%	33.6%	1.44 (0.38, 5.49)	0.59
Never been married	48.7%	37.3%	2.00 (0.63, 6.36)	0.24
Sexual Orientation				
Heterosexual	76.0%	84.3%	1.00 (--)	--
Bisexual	18.5%	6.5%	***3.73 (1.25, 11.1)***	***0.018***
Homosexual	5.5%	9.2%	1.30 (0.41, 4.20)	0.66
Education				
Less than high school graduate	34.5%	27.4%	1.00 (--)	--
High school graduate/GED+	65.5%	72.6%	0.67 (0.21, 2.11)	0.49
Employment Status				
Working/student/homemaker (FT, PT)	25.6%	38.1%	0.35 (0.12, 1.07)	0.07
Retired or disabled	34.9%	31.6%	0.81 (0.34, 1.94)	0.63
Unemployed	39.5%	30.2%	1.00 (--)	--
Yearly Household Income				
$0 to $9,999	59.5%	55.4%	1.00 (--)	--
$10,000 to $19,999	27.7%	33.0%	0.92 (0.36, 2.35)	0.87
$20,000+	12.8%	11.6%	1.21 (0.47, 3.18)	0.69
Housing				
Formerly homeless	15.0%	15.3%	0.82 (0.27, 2.46)	0.72
Currently homeless	25.3%	36.1%	0.46 (0.16, 1.34)	0.15
Never homeless	59.7%	48.6%	1.00 (--)	--
Correctional history				
Ever been to jail, prison, or juvenile detention	81.9%	67.8%	2.52 (0.73, 8.68)	0.14
Depressive symptoms (yes)	58.9%	37.8%	***2.35 (1.05, 5.23)***	***0.037***
Number sex partners, last year				
0	23.7%	43.0%	1.00 (--)	--
1	36.1%	34.3%	2.61 (0.87, 7.84)	0.087
2+	40.2%	22.7%	***5.12 (1.80, 14.6)***	***0.002***
Condom use at last sex (yes)	28.1%	33.0%	0.88 (0.40, 1.91)	0.74
Shared needles, last year (yes)	36.8%	52.6%	0.56 (0.23, 1.36)	0.20
Self-reported HCV+ (yes)	96.6%	92.4%	3.20 (0.54, 19.1)	0.20
In drug treatment, last year	36.3%	40.1%	0.91 (0.29, 2.93)	0.88
Injection Frequency, last year				
Daily	67.3%	48.2%	***4.78 (1.14, 20.0)***	***0.03***
Weekly	21.6%	17.4%	4.57 (0.94, 22.2)	0.06
Less than weekly	11.1%	34.4%	1.00 (--)	--

RESULTS

- 47% of participants reported that they would be very likely to take PrEP if it were provided for free (Figure 1).
- In bivariate analyses (Table 2), IDUs with the following characteristics had a higher odds of being likely to take PrEP if it were provided for free:
  - younger
  - bisexual
  - having depressive symptoms
  - having two or more sexual partners in the past year
  - daily injector (versus injecting less than weekly)

Table 3. Independent correlates of being very willing to use PrEP

Characteristic	AOR	95% CI	p-value
Age (years)			
<50	***2.68***	***1.18, 6.11***	***0.02***
50+	1.00	--	--
Depressive symptoms (yes)	2.02	0.94, 4.38	0.07
Number sex partners, last year			
0	1.00	--	--
1	2.30	0.80, 6.58	0.12
2+	***5.03***	***1.82, 13.9***	***0.002***

RESULTS (cont'd)

- In the multivariate model, younger (<50 years old) IDUs were nearly three times as likely (AOR: 2.68, 95% CI: 1.18, 6.11) to report being willing to take PrEP compared to older IDUs.
- IDUs who reported two or more sexual partners were more than five times as likely (AOR: 5.03, 95% CI: 1.82, 13.9) to report being willing to take PrEP compared to IDUs who did not have any sexual partners in the past year.
- IDUs with depressive symptoms were more likely to report being willing to take PrEP, but this relationship was not statistically significant.

DISCUSSION AND CONCLUSION

- To our knowledge, this is one of the first examinations of willingness to use PrEP in a community-based sample of IDUs in the United States.
- A large proportion of active IDU in Washington, DC reported being willing to use PrEP if it were available at no cost.
- IDUs who were younger, had more sex partners and had depressive symptoms reported to be very likely to use PrEP if it were available at no cost, suggesting that these groups could be targeted first to explore the practicality of PrEP use in this population.
- Further research should be done to explore availability and actual uptake of PrEP among IDUs in order to slow HIV transmission in this population.

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