What happens after HIV self-testing? Barriers to care and PrEP among men who have sex with men in Philadelphia

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Background: HIV self-testing (HIVST) is an effective strategy to expand test uptake among men who have sex with men (MSM). However, there remains a large gap in understanding the challenges associated with linking to care after HIVST, either ART if HIV positive, or PrEP if HIV negative. The aim of this study was to explore barriers and facilitators to care among MSM who obtained HIVST.

Methods: We conducted a sequential, explanatory mixed methods study among MSM ≥17 years of age, assigned male sex at birth, who had obtained an HIVST through the Philadelphia Department of Public Health. Participants completed an online survey after the HIVST that assessed intentions to seek care, and a 30-day follow-up survey to determine if they had obtained care. We used linear regression to identify correlates of intentions to seek care at baseline. To understand quantitative findings, we conducted interviews with HIV-negative participants and purposively sampled two groups: (1) those who obtained care and (2) those who did not. Interviews explored motivators, barriers, and facilitators to care after HIVST and were analyzed using modified grounded theory.

Results: A total of 84 participants completed the baseline survey between October 2022 and March 2024, of whom 31% were Black, 23% were Latine, 12% reported transgender/non-binary gender identities, and the median age was 28. Four (5%) individuals reported an initial positive HIVST result, all of whom obtained HIV care afterwards. A total of 51 HIV-negative participants completed the follow-up survey, of whom 27 (53%) obtained care within a month of HIVST. Higher intentions to seek care were associated with Black race and higher self-efficacy. We interviewed 21 participants who reported a negative HIVST, 12 of whom had linked to care and 9 who had not. The most salient facilitator in both groups was expansion of sexual health services, such as through telehealth and pharmacy-based PrEP service delivery and identifying trusted providers. Participants cited PrEP stigma, healthcare-related stigma, low perceived benefit to PrEP, difficulty identifying providers, and cost as barriers.

Conclusions: Effective interventions are needed to facilitate linkage to care after HIVST. Interventions that focus on expanding PrEP linkage in nontraditional settings, identifying trusted providers, and stigma reduction, warrant additional evaluation.

Table: Baseline Characteristics and Intentions to Seek Care After HIV Self-Testing among Men who have Sex with Men

Characteristic	N = 84	Univariable model		Multivariable Model[2]	
		β coefficient (95% CI)	*p*-value	β coefficient (95% CI)	*p*-value
Age, median (IQR)	28 (23, 34)	-0.01 (-0.04, 0.02)	0.58		
Race/Ethnicity					
White, non-Latine	28 (33%)	Ref		Ref	
Black, non-Latine	26 (31%)	1.02 (0.46, 1.59)	<0.01	0.93 (0.36, 1.50)	0.002
Latine, any race	19 (23%)	0.41(-0.18, 1.01)	0.17	0.29 (-0.30, 0.89)	0.33
Other race/multiracial, non-Latine	11 (13%)	-0.27 (-0.125, 0.71)	0.58	0.19 (-0.85, 1.23)	0.72
Gender identity					
Cisgender Man	74 (88%)	Ref			
Transgender, non-binary, or other gender identity	10 (12%)	0.01 (-0.38, 0.40)	0.97		
Prior anal sex with men	79 (94%)	0.50 (-0.75, 1.25)	0.62		
Education					
High school or less	24 (29%)	Ref			
Some college	23 (27%)	0.14 (-0.45, 0.72)	0.64		
College or higher	37 (44%)	-0.71 (-1.24, -0.19)	0.01		
Insurance status					
Uninsured	16 (19%)	Ref			
Public insurance	29 (35%)	0.63 (0.003, 1.26)	0.049	0.43 (-0.21, 1.07)	0.19
Private insurance	36 (43%)	-0.24 (-0.85, 0.37)	0.44	-0.32 (-0.97, 0.33)	0.33
Prior HIV test					
No prior HIV test	16 (19%)	Ref			
Last HIV test >1 year	4 (5%)	0.31 (-0.91, 1.53)	0.61		
HIV test in past year	64 (76%)	0.40 (-0.16, 0.96)	0.16		
PrEP knowledge, mean (SD)[1]	2.62 (1.57)	-0.043 (-0.20, 0.11)	0.58		
PrEP descriptive norms, mean (SD)[1]	3.43 (1.16)	0.10 (-0.14, 0.34)	0.40		
PrEP stigma, mean (SD)[1]	2.32 (0.53)	-0.26 (-0.84, 0.32)	0.37		
PrEP self-efficacy, mean (SD)[1]	3.00 (0.75)	0.30 (-0.04, 0.63)	0.08	0.45 (0.13, 0.78)	0.008

[1] Measures adapted scales to measure self-efficacy, descriptive norms, knowledge, on a continuous 4-point scale. Higher scores indicate higher levels of knowledge, descriptive norms, stigma, and self-efficacy.

[2] We used stepwise selection in the multivariable model with variables selected if p <0.15 in the univariable analysis. The model was fitted using Akaike information criterion.

Table 2: Barriers and Facilitators based on the Capability, Opportunity, Motivation, and Behavior Model

	Barriers	Facilitators
Capability	Insurance *"When I moved here, I meant to just do it[get PrEP]. But I didn't have health insurance."* Cost of PrEP and regular testing "*The only thing is it costs money to get tested. I'll pay for the doctor's visits. It's not like a prohibitory amount, but I think it should be free."*	
Opportunity	Lack of PrEP providers "*I think more locations to get testing done and such. Because I think there's only, like I don't remember how many last time I checked the website. It was a bit of a trek for me to get to that health center down on [street] to get tested."* *"It's really hard to go see a doctor in person. That's mostly it for me."* Limited appointment times "*I would say one thing [that makes it difficult to see a provider] would just be my work schedule, because I work a lot of hours"*	Greater appointment flexibility Telehealth PrEP services *"I would love the virtual option as much as possible, because sometimes that makes more sense and the same things that you commute to go sit in a doctor's office for. And by the time you get into the office, that visit could have been a virtual visit and a quarter of the time."* Pharmacy-based services *"Having access to it is one thing, but having multiple streams of access to something gives people who probably would say no to something that seems super accessible. Potentially, if they can get it out of pharmacy, it would be so much easier for them."* Known and trusted medical providers *"Because I trusted my primary care doctor, we had that conversation and before me going deep into a relationship with the person that I knew was positive, I had that conversation with my doctor and they let me know that this [PrEP] was available."*
Motivation	Low perceived risk and benefit of PrEP "*Well, I mainly top, and I know that's not an excuse, but also the risk is a lot lower. So that's probably part of it in my own internal dialogue."* PrEP and healthcare-related stigma *"But I use medication for various things. I hate the idea of having to even use medication for that consistently. It's annoying and it makes me feel weird."*	Self-efficacy *"You can feel 99.9 percent confident that you're not going to get HIV."*

	“But really, of course, mostly, it's probably stigma… I just need an honest open relationship with you [health provider] without judgment. That's all I need.”	