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Preferred Methods of Sexually Transmitted Infection Service Delivery Among an Urban Sample of Underserved Midwestern Men

Randolph D. Hubach, MPH*, Brian Dodge, PhD*, Alissa Davis, MA†, Andrew D. Smith, MPH†, Gregory D. Zimet, PhD‡, and Barbara Van Der Pol, PhD, MPH*,§

*Center for Sexual Health Promotion, Indiana University, Bloomington, IN

†Departments of Epidemiology and Biostatistics, Indiana University, Bloomington, IN

‡School of Medicine, Indiana University, Bloomington, IN

§Division of Infectious Diseases, University of Alabama-Birmingham

Abstract

Semistructured interviews were completed with a sample of 25 men residing in an urban area of the Midwestern United States to elicit preferred methods of sexually transmitted infection service delivery. Results highlight the influence of stigma, social support, and perceived risk on sexually transmitted infection screening uptake and preferred methods of screening.

Control of sexually transmissible infections (STIs) remains a priority for health care and public health organizations within the United States. Prevalence rates in the United States suggest that present practices have been unsuccessful in controlling both STI acquisition and transmission in men.¹ Although current public health programs remain vital for ensuring access to sexual health care, to reduce the prevalence of STIs successfully, particularly among asymptomatic men, novel approaches for intervening are warranted.

A number of strategies have been tested for increasing STI screening, particularly of asymptomatic populations likely to have a high prevalence of disease, using methods such as self-collected samples and Internet-based test results.^{2,3} The use of such methods allows for STI management to be expanded from specialized clinics and integrates it into other health systems. Increased sensitivity of diagnostic techniques (e.g., nucleic acid amplification tests) facilitate self-sampling and sampling in nonclinical settings.⁴

Screening programs seem acceptable to men^{2,5}; however, few data exist regarding men's preferences for screening opportunities other than those being offered as part of a research study.^{6,7} Few studies have evaluated men's preferences for venue-based sample collection.^{6–8} The literature on men's preferences for STI testing, specifically self-sampling

programs, has focused on men who have sex with men^{7,9–13} and high-risk youth.⁸ As such, there is a lack of focus on straight or heterosexual men who are not routinely engaged in STI screening. Asymptomatic STIs continue to be of significant concern among men because screening is infrequently sought by individuals who are not experiencing symptoms.¹⁴ Variable research results suggest the need to gather more information from potential end users about possible screening paradigms before designing instruments to evaluate preferences. This study sought to learn more about the preferred ways men want to access STI information, screening, and treatment to inform the development of future STI programs.

Between October 2012 and January 2013, 25 men (10 black, 10 white, 5 Hispanic/Latino) residing within Indianapolis, Indiana, completed a one-on-one in-depth structured interview lasting approximately 45 minutes on preferences for receiving STI care. Interview participants were referred to the study through members of their social networks who had recently accessed STI screening services (called “seeds”). Each seed ($n = 47$) was given 5 recruitment flyers to distribute to members of their social network, with each flyer containing contact information for research staff. In addition, each flyer contained a unique identifier to link interview respondents to the initial seed participant. Interview participants were eligible if they were born male, spoke English fluently, and were older than 17 years. Those completing an interview were asked to provide a urine sample for STI testing, specifically to screen for *Chlamydia trachomatis*, *Neisseria gonorrhoeae*, and *Trichomonas vaginalis*. If a participant reported being the receptive partner for anal intercourse, they were asked to provide a self-collected swab of their rectum. All participants were compensated with a \$40 gift card and were given the results of their STI testing and, if infected, treated. The institutional review board at Indiana University approved the study, and each study participant completed an informed consent process.

The interview guide consisted of main questions and content-specific probes, designed to elicit narratives from participants regarding: facilitators and barriers to STI testing uptake, preferred methods for STI screening, and preferred methods for receipt of STI results and, if medically indicated, STI treatment. A brief questionnaire elicited standard demographic items. Interview data from this study were analyzed using content analysis to inductively identify and interpret concepts and themes that emerged from the interview transcripts.¹⁵ This method involved multiple readings of transcripts and interview notes and analytic induction via open and axial coding of data using NVivo statistical software (version 10) to thematically organize transcripts. Coding was completed by 3 researchers independently and compared for agreement, with all codes having a $k = 0.80$. Demographic data were used to provide a more comprehensive portrait of occurring themes. Wherever necessary, descriptive analyses were conducted using the SPSS statistical software.

In total, 25 men were responded to requests to participate. Participant ages ranged between 18 and 54 years (median, 24 years; mean [SD], 30.1 [12.7] years) with most participants primarily identifying as heterosexual (92%; $n = 23$), unemployed (76%; $n = 19$), and currently dating or in a relationship with a single partner (64%; $n = 16$). As indicated in Table 1, most participants reported a previous test for an STI (60%; $n = 15$) and for HIV

(52%; n = 13). Of our total sample, 16% (n = 4) tested positive for an STI, with 8% (n = 2) testing positive for *C. trachomatis* and 8% (n = 2) testing positive for *T. vaginalis*.

A number of themes emerged from the data in regard to preferred STI service delivery, including the following: how STI information was gathered, perceived barriers to accessing clinical STI screening venues, and perceived stigma from their sexual and social networks. Seeking out STI screening was mitigated by 2 factors: a lack of perceived sexual risk and lack of STI symptoms. Verbatim exemplars from data are presented in table form with additional text dedicated to highlighting and expounding on connections (Tables 2–4).

Largely, participants acquired STI and sexual health information via Internet resources. Although the Internet was used to seek out information, participants questioned the accuracy of STI and sexual health information found through simple Internet searches. Further work is therefore necessary to educate men on seeking out accurate, credible, and reliable STI resources. The perceived flaws associated with acquiring health information via the Internet may help to explain why there was less endorsement of electronic options to receive screening results. Similar to previous work, there was high interest in maintaining communication with health care professionals.⁶ Among our sample, health care professionals were viewed as experts in the field to whom participants preferred to defer on matters of STIs, screening results, and treatment.

Given the prevalence of asymptomatic STIs within our sample, it is important to understand potential barriers to routine STI screening uptake. Similarly to other participants, those with an asymptomatic STI reported numerous barriers to seeking clinical STI screenings in traditional settings. Although not a novel finding, data from participants' confirmed current STI screening practices were influenced by the degree of perceived stigma from both their sexual and social networks.^{16,17} When asked to discuss their preferred method for receiving STI services, participants stressed the importance of privacy. For most participants, it was critical to expand services beyond the traditional settings of STI clinics. Those participants with an asymptomatic STI reported that they would be more likely to engage in routine screening in a venue that allowed for the greatest anonymity. Specifically, there was a propensity for men to prefer access to STI screening through pharmacies, grocery stores, and community-based organizations. These venues are frequently found within urban communities, providing increased accessibility for a population with potentially limited access to transportation.

Participants desired screening paradigms that allowed for prompt results, a greater sense of privacy, and the ability to be empowered through self-sampling methods. Most participants perceived themselves to be at low risk for STI acquisition. Similar to previous work, a lack of current STI symptoms in conjunction with underlying beliefs that current relationships were sexually monogamous influenced overall notions of potential risk.^{18,19} Although relationship lengths varied among our respondents, they tended to perceive themselves to be in monogamous relationships and therefore at a lower STI risk. Potential STI risk may be evaluated within the contexts of intimacy and trust, which typically are at the forefront of both newly developed and longer-term relationships.²⁰

Congruent with other studies on STI screening, interest in self-sampling was high.^{2,3,6} In the development of future screening paradigms, it may be essential to provide opportunities for individuals to self-sample within their own home or another location that allows for privacy. Among our participants, there was not a clear preference as to ways specimens should be submitted to a laboratory for screening; however, participants reported that they would prefer to either mail-in their specimens to a laboratory or to drop off them at a local pharmacy, clinic, or community-based organization. Although preferences varied on ways to submit specimens, men still preferred methods that allowed for greater anonymity and for quicker processing by laboratories.

By recruiting asymptomatic men who were not actively engaged in STI care, we were able to gather unique information about acceptable approaches to future STI screening and current barriers to accessing routine STI care. Without addressing the social context of STI screening among asymptomatic men, one might approach screening behavior as occurring within a vacuum, rather than exploring and articulating how stigma, social support, and perceived risk play a powerful role. Through the use of qualitative methods, ideal for exploratory research with topics about which little is known, participants provided us with new concepts for components of screening programs that overcome structural and social barriers. Their in-depth observations also supported some existing ideas that have been previously reported on men who were actively engaging in STI screening.⁶ It will be essential to develop programs that can reach, and are acceptable to, men who are asymptomatic but potentially infected with STIs. This qualitative study represents an important first step in this process. Subsequent, larger-scale quantitative studies with community-based samples of asymptomatic men will be important to carry out to more precisely identify effective components of STI screening programs.

Our findings are limited by the fact that this was a relatively small, qualitative study of men residing in one Midwestern US city. The results may not be representative of the larger population of men residing throughout the United States. In addition, our sampling framework and the size of our sample limited our ability to observe potential pattern differences among subpopulations of asymptomatic men. Seed participants were utilized to recruit members within their social networks; however, it is unknown as to how many recruitment flyers were distributed. We relied on the self-reported definitions, experiences, and behaviors provided by participants in an effort to collect rich and detailed narratives of preferred methods for STI service delivery.

Even within the confines of these limitations, study findings suggest the importance of developing less medically oriented systems of care, which allow for men to choose from an array of options not only to receive STI screening, but also STI results, medical consultation, and, if medically warranted, STI treatment. Removing perceived barriers, notably access and privacy concerns, to STI screening is one potential method to increasing STI screening uptake among men regardless of sexual relationship status or perceived risk. Our findings provide further evidence for the need to tailor the development of STI screening and treatment options that are acceptable to asymptomatic men in traditionally underserved areas.

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TABLE 1

STI and HIV Screening Characteristics (n = 25)

	%	n
Previous test for an STI		
Yes	60.0	15
No	40.0	10
Most recent STI test*		
Past 30 d	0.0	0
Within past 3 mo	6.7	1
Between 3–6 mo	20.0	3
Between 6 mo–1 y	33.3	5
>1 y	0.0	0
Unsure	40.0	6
Previous STI diagnosis*		
Chlamydia	40.0	6
Gonorrhea	33.3	5
Previous test for HIV		
Yes	52.0	13
No	48.0	12
Most recent HIV test†		
Past 30 d	15.4	2
Within past 3 mo	7.7	1
Between 3–6 mo	15.4	2
Between 6 mo–1 y	30.8	4
Between 1–2 y	0.0	0
>2 y	15.4	2
Unsure	7.7	1
Most recent HIV test result†		
Negative	92.3	12
Positive	0.0	0
Unsure	7.7	1

* Calculated based on the total number of sample reporting having been tested for an STI.

† Calculated based on the total number of sample reporting having been tested for HIV.

TABLE 2

STI Information Gathering

Theme	Illustrative Quotes
Resistance to traditional methods	"Pamphlets aren't gonna work cause no one picks up pamphlets, unless they're experiencing something."
Internet as cue to action	"I would get on the Internet... see what fits me and if it does you know maybe I'm just trippin' but if it actually explains everything that's going on then I think I need to see a doctor."
Questioning STI information accuracy	"Guys actually use the Internet... but it's bad because there is a lot of false information out there... you don't know what you're reading is true or not. A lot of times I guess a lot of guys won't go to like whatever website, health site, the'd probably just go to Google and then read the first Google thing on there, and that could be the craziest thing you could ever read that's not true... the credibility thing is, absolutely necessary. Cause it's, there's no telling. You know, any dotcom can make it look credible."
Resistance to Internet information gathering	"That's the only place I would go because if I had a concern that's where I would go, to the health department. I wouldn't waste my time being online but I'm 45 years old. I mean I've been around the block, so if I've had any concerns I would go to the health department because they would know what's going on."

TABLE 3**Barriers to STI Screening Uptake**

Theme	Illustrative Quotes
Access to STI clinics	"I just don't know how to go about it... I have no money, no ride... really no way to go take one."
Lack of perceived risk	"I've only really been sexually active with one person... she's kinda been on the same track as me. I mean, she hasn't had sex with anyone every really since she's told me, and I trust her completely."
Lack of STI symptoms	"I didn't have any symptoms or anything so I wasn't incredibly concerned about it... people don't feel like it's important enough to take the time unless they've got symptoms... I'm safe and everything, so it doesn't really concern me that much anymore."
Embarrassment	"Guys, they worry about the embarrassment... the only reason a guy goes to the clinic if he's burning [having symptoms]." "If you're going to the, to a certain clinic... walking in those doors can be embarrassing, I mean it can be horribly embarrassing...most guys would rather die... nobody wants to be seen there."
Potential stigma regarding diagnosis	"I don't know how I would react to it [STI diagnosis]. And some men, they just rather not know if they do have it. They rather not know."

TABLE 4

Preferences for STI Service Delivery

Theme	Illustrative Quotes
Access to self-sampling kits	"I'd like to go see it at the grocery store and pharmacies... You can easily be tested in the privacy of your home." "Community centers because I'm pretty sure that they would do all they can do to help you... To gain access to kits and stuff like that."
Prompt results	"You get it right then, you wouldn't have to sit there and wait and be thinking about it all the time, it's on your mind. Do I got it, do I don't? I just like it because it's quick."
Provider as expert	"I'd rather be professionally told that it's positive or negative...whatever the situation may be... I like to be able to talk to the doctor if I have questions." "Just to be able to talk to a doctor, you know, face-to-face...just talk about solutions we can do about it. I'd like face-to-face interaction, you know? You can like just talk to him if you got any questions or anything like that. He can answer it for you right there."
STI treatment access	"It would be convenient to be able to just go down to your local health department...or even possibly a pharmacy... and pick up antibiotics."
Desire for prompt treatment	"I wouldn't want to have to wait for it to come in the mail... I would want to treat it immediately."