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"Just getting by": A cross-sectional study of male sex workers as a most-at-risk population for HIV/STIs among men who have sex with men in Peru

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Abstract

Objectives—To describe the socio-demographic and sex work characteristics, recent sexual practices, HIV risk perception and testing history, and HIV and syphilis prevalences of Cercado (downtown) and non-Cercado (close urban) male sex workers (MSWs) in Lima, Peru.

Methods—Eighty-nine MSWs completed a self-administered survey and participated in HIV and syphilis testing.

Results—Cercado MSWs had significantly lower median weekly earnings than non-Cercado MSWs (US \$43 versus \$72, p=0.04). Most non-Cercado MSWs (81%) reported only insertive anal intercourse with male/transgender partners, while Cercado MSWs primarily reported only insertive (52%) or both insertive and receptive (45%) anal intercourse (p=0.03). Consistent condom use was low with insertive and receptive anal intercourse in both sub-groups. Among MSWs with recent female partners, condom use with the last partner was lower among Cercado versus non-Cercado MSWs for vaginal sex (37% versus 65%, p=0.04) and anal sex (27% versus 80%, p=0.01). More Cercado than non-Cercado MSWs (57% versus 42%) perceived high HIV risk (p=0.05) and Cercado MSWs had a much higher prevalence than non-Cercado MSWs of HIV [23% versus 4% (p = 0.04)] and syphilis [22% versus 0% (p = 0.02)] infections.

Conclusion—MSWs in Lima are diverse and *Cercado* MSWs are "just getting by," engaging in more risk behaviors, and more likely to have HIV/STIs. Future research should identify, describe

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and HIV/STI test broader groups of MSWs and their client and non-client partners. Prevention efforts should provide HIV/STI risk reduction education for MSWs and related sub-groups who are currently not targeted such as female partners.

INTRODUCTION

HIV and other sexually transmitted infections (STIs) disproportionately affect men who have sex with men (MSM) in Peru and other South American countries. Peru's most recent HIV surveillance survey (2011) found an HIV prevalence of 12.4% among MSM in the capital city of Lima,[1] compared to 1.0% among female sex workers (FSWs) nationwide, [2-3] 2.4% among clandestine FSWs in Lima,[4] and less than 1.0% in the country's general population.[5] A study of high-risk, low-income groups from urban coastal Peru found that 10.5% of men who have sex with only men had recent syphilis infection, compared with 1.5% of heterosexual men and 2.0% of heterosexual women.[6] Another study found that recent syphilis prevalence was also low among FSWs nationwide (1.3%).[3]

In Peru, there is research on several populations that could form an epidemiologic bridge for HIV/STI transmission from MSM to the heterosexual population, including important qualitative work with male sex workers (MSWs). Studies with potential bridge populations include heterosexually identified men,[6-10] male sex partners of pregnant women,[11] male clients of FSWs,[12] and men who have sex with men and women.[13] The first study with MSWs in Peru took place in the mid-1990s and used qualitative methods to explore the lives, identities, sex work and prevention practices of MSWs who work in a middle-income neighborhood of Lima.[14-15] More recent qualitative work described both sex work and other forms of work among male- and transgender-identified sex workers in Lima and two jungle cities.[16]

This is the first quantitative study in Peru with MSWs. The objective was to describe the socio-demographic and sex-work related characteristics, recent sexual practices, HIV risk perception and testing history, and prevalence of HIV and syphilis for two sub-groups of MSWs in Lima, those who work downtown (*Cercado*) and those who work in surrounding urban neighborhoods (non-*Cercado*).

METHODS

Study Setting

Peru, located in Western South America, is home to about 29 million people.[17] The population is distributed across three regions, the coast, Andean highlands and Amazon jungle. Lima, the capital city, is home to one-third of the population (8.5 million)[17] and accounts for about 60 percent of the HIV/AIDS cases reported to date nationwide.[18]

Study Participants

Eighty-nine MSWs participated in this study, which was part of a larger study to describe MSWs' perceptions of their current lives, futures and HIV- and STI-related risks and vulnerabilities through interviews, focus groups and surveys and to estimate the prevalence of HIV and syphilis among MSWs. Data collection took place from February to April 2010.

Prior to recruitment, we carried out ethnographic mapping of male sex work in downtown Lima (*Cercado*) and surrounding urban neighborhoods (non-*Cercado*). We mapped 22 physical commercial sex venues, including public plazas and streets, saunas, pornographic video houses, bars and nightclubs, and documented MSWs offering commercial sex services through newspaper classifieds, gay websites, chat rooms and "spreading the word" among friends.[19]

For recruitment, we used purposive sampling to seek out study participants from the venues mapped in the ethnographic mapping.[20] Participants met the following inclusion criteria: born male and self-identifies as male, 18 years of age or older, resides in Lima, self-identifies as a sex worker, and reports trading sex for money, goods or services at least once in the past week. We included more MSWs who work in the *Cercado* area since they represent significantly more of the MSWs in Lima than MSWs who work in non-*Cercado* neighborhoods. Participants were recruited to participate in a focus group or an interview (data reported elsewhere), followed by completion of a survey and HIV and syphilis testing.

Data Collection

First, we piloted the survey with 10 MSWs during a focus group. Pilot participants completed the draft survey individually section by section. After all participants had completed each section, a facilitator engaged participants as a group regarding the overall language, the content of the questions, the range of response options, and whether other key questions or topics were missing. The facilitator also asked participants whether self-administered surveys were appropriate for a survey with MSWs about these topics and participants affirmed that they were. We used participant feedback to develop the final survey.

Survey questions asked about socio-demographic characteristics, work experience including sex work, lifetime sexual partners, recent sexual behaviors with male or transgender and female partners, and HIV risk perception and testing history. Participants completed the surveys themselves, using a pencil-and-paper format. Study staff was available to assist participants with survey completion, if participants solicited assistance. After completing the survey, participants who agreed to be tested for HIV and/or syphilis were invited individually to a private room with a tester/counselor who had experience carrying out STI counseling and testing with MSM. We followed the Peruvian Ministry of Health guidelines for HIV and syphilis counseling and testing. First, the counselor/tester provided the participant with pre-test counseling. Next, the counselor/tester took a finger-prick blood sample for rapid HIV testing and a venous blood sample for syphilis/confirmatory HIV testing. After waiting for the rapid HIV test result, the counselor/tester provided the rapid HIV test result and post-test counseling and invited the participant to return in two weeks for his syphilis test result and confirmatory HIV test result, if relevant. At the return visit, participants received additional counseling and referrals for ongoing care and treatment, to the Ministry of Health in the case of HIV and a local non-governmental organization in the case of syphilis.

Data Analysis

We performed the analyses using STATA 11.0 for Macintosh (StataCorp LP, College Station, TX; USA). First, we carried out descriptive and exploratory analyses. One participant was excluded from further analysis given significant amounts of missing data. Next, we carried out bivariate analyses of the association between being a *Cercado* versus non-*Cercado* MSW and key variables related to sociodemographics, sex work, sexual behaviors, HIV risk perception and testing history, and prevalence of HIV and syphilis. We used the t-test and Mann-Whitney test for continuous variables and the chi-squared and Fisher's exact tests for categorical variables, as appropriate. All tests were two-sided with a significant p-value of 0.05 and 95% confidence intervals.

The analysis of the HIV and syphilis samples was as follows. For HIV, we used the Bioline HIV 1/2 3.0 rapid test (Standard Diagnostics, Inc.; Korea) to provide initial HIV results onsite. Confirmatory HIV testing was performed on the venous blood of participants with reactive rapid test results using Western Blot (Genetic Systems, Biorad; Hercules, CA). For syphilis, participants' venous blood was screened for the disease using an RPR assay (RPRnosticon, Biomérieux; Marcy l'Étoile, France) and positive results were confirmed by Treponema Pallidum Particle Agglutination (TPPA) assay (Serodia, Fujirebio America; Fairfield, NJ). TPPA-reactive specimens were diluted to measure the RPR titer and recent syphilis infection was defined as an RPR titer 1:8.

Ethics

The University of California, Los Angeles Institutional Review Board and the Universidad Peruana Cayetano Heredia Ethics Committee reviewed and approved the protocol, survey and informed consent form. No study procedures took place prior to securing both approvals. All study participants provided verbal informed consent for each study procedure: survey; HIV testing; and syphilis testing. Participants did not participate in any procedures to which they did not consent.

RESULTS

The 62 *Cercado* and 26 non-*Cercado* MSWs had some similar socio-demographic characteristics (see Table 1), but their household socio-economic level and sexual identity differed. Many more *Cercado* (19%) than non-*Cercado* MSWs (4%) reported being homeless or having no assets and fewer *Cercado* (37%) than non-*Cercado* (61%) MSWs were middle- or high-income, although this result was marginally statistically significant (p=0.055). The overwhelming majority of non-*Cercado* MSWs reported identifying as bisexual (81%) while most *Cercado* MSWs identified as homosexual (34%) or bisexual (45%) (p=0.002).

Although most participants from both sub-groups reported multiple sources of income, sex work was the most profitable source (81% of *Cercado* and 65% of non-*Cercado* MSWs). Differences in earnings across the two groups were substantial. The median weekly earnings of the non-*Cercado* MSWs were US \$72 (IQR 36-161), which was 1.5 times higher than that of *Cercado* MSWs at US \$43 (IQR 25-79) (p=0.04). The earnings per client showed a

parallel trend of a median of US \$24 (IQR 8-29) for non-*Cercado* MSWs, 2.5 times higher than the US \$9 (IQR 6-12) earned by *Cercado* MSWs (p=0.01).

The survey also explored participants' sexual practices during the last three months (see Table 2). All participants reported anal intercourse (AI) with multiple male or transgender partners. Most non-*Cercado* MSWs (81%) reported only insertive AI, while *Cercado* MSWs primarily reported only insertive (52%) or both insertive and receptive (45%) AI (p=0.03). Finally, consistent condom use during insertive and receptive AI was low in both subgroups.

There were significant differences in participants' reports of recent female sex partners (see Table 2). Almost all non-*Cercado* MSWs (89%) reported at least one female sex partner in the last 3 months, compared to less than half of *Cercado* MSWs (48%) (p<0.01). Additionally, non-*Cercado* MSWs reported significantly more recent female partners than *Cercado* MSWs (p=0.02). Among participants with recent female sex partners, all reported vaginal sex and about two-thirds reported anal sex. Consistent condom use with female partners was lower among *Cercado* versus non-*Cercado* MSWs for vaginal sex (23% versus 39%) and anal sex (25% versus 53%), although these differences were not statistically significant.

In terms of most recent sex partners (see Table 3), while *Cercado* MSWs' most recent male and transgender partners were overwhelmingly male non-clients and male clients, non-*Cercado* MSWs' most recent sex partners were more diverse and included male and transgender clients and non-clients (p=0.03). Receptive AI with the last male or transgender partner was higher among *Cercado* MSWs than among non-*Cercado* MSWs, although this difference was not statistically significant. The majority of participants' last female partners were non-clients, although a significant minority reported that their most recent female partners were clients. About half of participants reported engaging in only vaginal sex and about half in both vaginal and anal sex with their most recent female partner. Condom use was much higher among non-*Cercado* versus *Cercado* MSWs for both vaginal sex (65% versus 37%, p=0.04) and anal sex (80% versus 27%, p=0.01). Alcohol and drug use before or during sex was similar with male or transgender versus female partners, with about three out of ten participants reporting alcohol use and one to two out of ten participants reporting drug use. Participants from both groups affirmed that discussions about HIV status with their partners are infrequent.

As shown in Table 4, when asked about their risk of HIV, more *Cercado* than non-*Cercado* MSWs (57% versus 42%) perceived high to very high risk and fewer *Cercado* MSWs than non-*Cercado* MSWs (2% versus 16%) perceived no risk (p=0.05). Previous HIV testing was similar in both groups, with about 1 in 5 participants reporting no previous HIV test, 2 in 5 reporting an HIV test longer than 6 months ago, and 2 in 5 reporting an HIV test in the last 6 months. Finally, and very importantly, *Cercado* MSWs had much higher prevalences than non-*Cercado* MSWs of HIV [23% versus 4% (p = 0.04)], syphilis [22% versus 0% (p = 0.02)], and recent syphilis [10% versus 0% (p=0.17)] infections.

DISCUSSION

Our results clearly show that MSWs in Lima are diverse and that *Cercado* MSWs are "just getting by." *Cercado* MSWs have significantly higher general vulnerabilities, sexual risk practices, and HIV and syphilis prevalences than their non- *Cercado* peers.

Cercado MSWs come from lower-income backgrounds and earn significantly less from sex work than their non-Cercado peers, demonstrating that sex work helps Cercado MSWs to "get by," but not to make progress in life. Studies in other settings have found similar differences among sub-groups of MSWs. A study with MSWs in Córdoba, Argentina found that lower-income street-based MSWs earned less from sex work than higher-income independent MSWs.[22] One MSW who participated in a study in Russia stated that economically vulnerable MSWs working in outdoor spaces "work for a piece of bread," in sharp contrast to other sub-groups of MSWs who earn more.[23] A study with male hustlers or michês in Rio de Janeiro, Brazil described possible reasons for the differences in earnings between different sub-groups of MSWs, specifically the need for a certain amount of capital to make a living as a MSW. MSWs who could maintain their appearances and access things like telephones and mailing addresses (in other words, those who were higher-income) made more money as sex workers than those who had less capital. [24] Results here affirm the importance of structural HIV/STI prevention interventions with MSWs. Our research group is currently initiating a pilot intervention in the form of a community center that includes vocational training and job seeking training and support in order to generate additional economic opportunities for MSWs in Lima

Although the Cercado and non-Cercado MSWs in this study had some similar sexual risk behaviors, they reported differences in key practices that may influence their risk of HIV/ STIs and that of their male, transgender and female partners. While most non-Cercado MSWs reported only insertive AI, about half of Cercado MSWs reported engaging in both insertive and receptive AI, with low consistent condom use. Past studies that explored sexual identities among MSM in Peru found that being insertive or activo is considered to represent heterosexuality and masculinity, being receptive or pasivo is seen as gay or homosexual and feminizing, and being versatile (insertive and receptive) or moderno moves away from this traditional activo-pasivo dyad. [25-27] Clark et al (2013) described the moderno role as a gay reconceptualization of masculine identity. A study with 2,655 MSM in Peru found report of sex work to be associated with self-identifying as versatile or moderno.[28] Among MSWs surveyed in Argentina, almost four in ten participants were willing to engage in receptive AI with clients.[22] In Kenya, a high proportion of MSWs had engaged in only receptive AI (34%) or both insertive and receptive AI (8%) with their last male client. [29] These results underscore the need for a behavioral intervention that builds MSWs' knowledge while taking into consideration their true sexual identities, roles and practices and the related stigma that MSWs may experience as a result. Our pilot intervention also includes HIV/STI risk reduction workshops that will openly discuss sexual identities, roles and practices and relevant risk reduction practices.

Although fewer *Cercado* than non-*Cercado* MSWs had recent female partners, *Cercado* MSWs were less likely than their peers to use condoms during vaginal and anal sex with

women. A recent study in Kenya of two groups of MSWs' female partners also found low condom use with paying and non-paying partners. Condom use was lowest for anal sex with the last non-paying female partner, during which only 54% of MSWs used a condom [30]. Higher frequency of unprotected vaginal and anal sex may increase the HIV/STI risk of *Cercado* MSWs' female partners and underscores the importance of increased education for MSWs' female partners and for MSWs. Discussions about sexual practices and the importance of prevention with female partners will be part of our pilot intervention's HIV/STI risk reduction workshops with MSWs.

Finally, *Cercado* MSWs perceived a much higher risk of HIV than their non-*Cercado* peers. In a qualitative study with a sub-group of the MSWs surveyed here, participants highlighted several factors that may lead to inconsistent use of condoms, particularly among *Cercado* MSWs [31]. One factor is poor future outlook, which was affirmed by *Cercado* MSWs interviewed [31], and which has been shown to be associated with lower condom use in different populations in different contexts.[32-33] Other factors influencing MSWs are emotional attachment to and financial dependence on clients, which are interconnected. *Cercado* MSWs in the qualitative work in Lima affirmed the link between emotional/financial attachment and lower condom use [31], a relationship that has also been demonstrated among MSWs in Costa Rica.[34] Our pilot intervention with MSWs in Lima will also include personal development workshops, to help MSWs to build aspects of self such as self-esteem, communication skills and life goals and plans.

This study has strengths and limitations. Its primary strength is that it represents the first quantitative study with MSWs in Peru as a discrete group and that it includes two key subgroups of MSWs. One limitation is the small sample size. Therefore, the study does not have sufficient power to detect differences between the two sub-groups of MSWs. However, since MSWs are a population that is very difficult to access, this study represents an important initial quantitative description of MSWs in Lima and Peru. A second limitation is the use of purposive instead of random sampling, which limits the generalizability of results to a broader population. The final limitation relates to social desirability bias. MSW participants may have reported what they perceived that the study team or broader society wanted to hear, not what they actually feel and experience. We aimed to reduce this bias by using self-administered surveys since they allowed participants to respond privately instead of sharing their answers with the study team.

CONCLUSION

This study describes the unique characteristics, practices and needs of MSWs, and particularly *Cercado* MSWs, in Lima. Future research needs to identify, describe and carry out HIV/STI testing with broader, larger groups of MSWs and their clients and non-clients in Lima and other areas of Peru. Future prevention efforts need to provide HIV/STI risk reduction education for MSWs, with a focus on the importance of using prevention strategies with all partners, and for key related sub-groups who are not typically targeted such as female partners.

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KEY MESSAGES

• *Cercado* (downtown) male sex workers (MSWs) earned significantly less than non-*Cercado* (close urban) MSWs, with *Cercado* MSWs "just getting by."

- Non-Cercado MSWs (81%) reported only insertive anal intercourse with male/ transgender partners. Cercado MSWs reported only insertive (52%) or both insertive and receptive (45%) anal intercourse.
- Condom use with the last female partner was lower among *Cercado* than non-*Cercado* MSWs for vaginal (37% versus 65%) and anal (27% versus 80%) intercourse.
- *Cercado* MSWs had a much higher prevalence than non-*Cercado* MSWs of HIV (23% versus 4%) and syphilis (22% versus 0%) infections.

Table 1

Male sex workers' socio-demographic and sex work related characteristics

	Cercado (downtown) n=62	Non-Cercado (close urban) n=26	p-value
Socio-demographics			
Age in years, median (IQR)	23 (20-28)	23 (21-26)	0.76
High school graduate	63%	69%	0.38
Has at least one child	21%	23%	0.82
${\it Household socio-economic level}^I$			
Homeless or no assets	19%	4%	0.06
Low-income	44%	35%	
Middle- or high-income	37%	61%	
Sexual identity			
Heterosexual	21%	15%	< 0.01
Homosexual	34%	4%	
Bisexual	45%	81%	
Sex work			
Primary sex work location			
Street-based	47%	42%	0.01
Venue-based (nightclub, bar, sauna, porn video)	45%	23%	
Internet, newspaper or "spreading the word"	8%	35%	
Years in sex work, median (IQR)	4 (2-7)	6 (2-8)	0.51
Sex work as only source of income	34%	19%	0.13
Sex work as most profitable source of income	81%	65%	0.13
Weekly earnings from sex work, 2010 USD, median (IQR)	43 (25-79)	72 (36-161)	0.04
Earnings per client, 2010 USD, median (IQR)	9 (6-12)	24 (8-29)	0.01

¹ For household socio-economic level, we used an assets-based index with the following point assignation: 1 for public utilities, 2 for large household appliances, and 3 for vehicles. Scores were: 0-5 for low-income, 6-10 for middle-income, and 11-17 for high-income. We developed and validated the index in an earlier study on HIV risks and vulnerabilities among youth in situations of vulnerability in Peru.[21]

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Male sex workers' sexual practices during the last 3 months

	Cercado (d n=	(downtown) n=62	Cercado (downtown) Non-Cercado (close urban) p-value n=62 n=26	(close urban) 26	p-value		Cercado (dow n=62	owntown) 52	Cercado (downtown) Non-Cercado (close urban) p-value n=62 n=26	(close urban) 26	p-value
	%	N/u	%	N/n			%	N/n	%	N/u	
Male and transgender partners						Female partners					
Any male/trans partner	100%	62/62	100%	26/26	1.00	Any female partner	48%	30/62	%68	23/26	<0.01
Number of male/trans partners, median (IQR)	21 (1	21 (10-50)	14 (6-40)	40)	0.20	Number of female partners, median (IQR)	2 (1-7)	(<i>L</i> -	9 (3-15)	15)	0.02
Any insertive AI	%26	60/62	100%	26/26	0.49	Any vaginal sex	100%	30/30	100%	23/23	1.00
"Always" condom use, insertive AI	38%	23/60	20%	13/26	0.31	"Always" condom use, vaginal sex	23%	7/30	39%	9/23	0.17
Any receptive AI	48%	30/62	%61	5/26	0.01	Any anal sex	53%	16/30	74%	17/23	0.11
"Always" condom use, receptive AI	40%	12/30	20%	2/4	0.70	"Always" condom use, anal sex	25%	4/16	53%	9/17	0.09
Overall practices					0.03	Overall practices					0.10
Only insertive AI	52%	32/62	81%	21/26		Only vaginal sex	47%	14/30	26%	6/23	
Only receptive AI	3%	2/62	%0	0/26		Only anal sex	%0	0/30	%0	0/23	
Both insertive and receptive AI	45%	28/62	19%	5/26		Both vaginal and anal sex	53%	16/30	74%	17/23	
	I						I				

Table 3

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Male sex workers' sexual practices, alcohol and drug use, and discussions about HIV with their most recent sex partners

	Cercado (Cercado (downtown) n=62	Non-Cercado (close urban) n=26	close urban)	p-value		Cercado (downtown) n=62	owntown) 52	Non-Cercado (close urban) n=26	(close urban) 26	p-value
	%	N/n	%	N/u			%	N/n	%	N/n	
Male and transgender partners						Female partners					
Identity of last partner					0.03	Last partner					
Male non-client	47%	29/62	27%	7/26		Non-client	84%	25/30	%02	16/23	0.48
Male client	48%	30/62	20%	13/26		Client	13%	4/30	26%	6/23	
Trans non-client	3%	2/62	%8	2/26		Sex worker	3%	1/30	4%	1/23	
Trans client	2%	1/62	15%	4/26							
Insertive AI	87%	54/62	100%	26/26	0.05	Vaginal sex	100%	30/30	100%	23/23	1.00
With a condom	82%	44/54	77%	20/26	0.42	With a condom	37%	11/30	%59	15/23	0.04
Receptive AI	32%	20/62	15%	4/26	0.08	Anal sex	20%	15/30	44%	10/23	0.64
With a condom	25%	11/20	75%	3/4	0.63	With a condom	27%	4/15	%08	8/10	0.01
Overall AI practices					0.19	Overall practices					0.64
No AI (only oral sex)	2%	1/62	%0	0/26		Only vaginal sex	20%	15/30	%95	13/23	
Only insertive AI	%99	41/62	85%	22/26		Only anal sex	%0	0/30	%0	0/23	
Only receptive AI	11%	7/62	%0	0/26		Both vaginal and anal sex	20%	15/30	44%	10/23	
Both insertive and receptive AI	21%	13/62	15%	4/26							
Alcohol use before / during sex	39%	24/62	35%	9/26	0.72	Alcohol use before / during sex	33%	10/30	39%	9/23	0.44
Drug use before / during sex	18%	11/62	78%	2/26	0.19	Drug use before / during sex	7%	2/30	%6	2/22	0.57
Discussion about HIV					0.16	Discussion about HIV					0.53
No discussion	%92	47/62	%29	16/26		No discussion	%LL	23/30	74%	17/23	
Partner said he has HIV	1%	1/62	%0	0/26		Partner said she has HIV	%0	0/30	%0	0/23	
Partner said he does not have HIV	18%	11/62	38%	10/26		Partner said she does not have HIV	23%	7/30	26%	6/23	
Partner doesn't know his status	2%	3/62	%0	0/26		Partner doesn't know her status	%0	0/30	%0	0/23	

Table 4

Male sex workers' HIV risk perception and testing history and HIV and syphilis prevalence

	Cercado (downtown) n=62	:	Non-Cercado (close urban) n=26		p-value
Perceptions and testing history	%	n/N	%	n/N	
Perceived risk of HIV ¹					
None	2%	1/58	16%	4/26	0.05
Little to average	41%	24/58	42%	11/26	
High to very high	57%	33/58	42%	11/26	
Previous HIV test					
Never	23%	14/62	23%	6/26	0.98
In last 6 months	40%	25/62	42%	11/26	
Longer than 6 months ago	37%	23/62	35%	9/26	
HIV and syphilis prevalence ²					
HIV	23%	14/61	4%	1/23	0.04
Syphilis, any RPR	22%	13/60	0%	0/20	0.02
Syphilis, RPR 1:8	10%	6/60	0%	0/20	0.17
HIV-syphilis co-infection, any RPR	8%	5/60			
HIV-syphilis co-infection, RPR 1:8	7%	4/60			

¹ Four Cercado MSWs did not respond to the question about perceived HIV risk since they reported being HIV positive on an earlier survey question.

² For HIV testing, 1 *Cercado* MSW and 3 non-*Cercado* MSWs refused to be tested. For syphilis testing, 1 *Cercado* MSW and 2 non-*Cercado* MSWs refused to be tested. Additionally, for syphilis testing, the tester/counselor was unable to do the venous blood draw for 1 *Cercado* MSW and 1 non-*Cercado* MSW.