

# Assessing factors to increase uptake of testing for syphilis and HIV in men who have sex with men and transgender women in Lima, Peru. 2013

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## Background

- Men who have sex with men (MSM) in Lima are at high risk for syphilis and HIV
- We used conjoint analysis, an innovative method for systematically estimating consumer preferences across discrete attributes, to identify factors associated with testing preferences for HIV and syphilis infection



## Methods

- We recruited 420 MSM and transgender women aged 18 years and over seeking testing or care in two STD clinics in Lima, Peru in 2013
- We created 8 hypothetical test profiles varying across six dichotomous attributes: cost (free vs. \$4), accuracy (no false positive vs. false positive), time-to-result (20 minutes vs. 1 week), blood draw method (finger prick vs. venipuncture), number of draws (1 vs. 2), and test type (rapid vs. laboratory)
- Participants were asked to rate each hypothetical test using Likert preference scales
- Ratings were converted to 100-point preference scores; higher scores suggest increased preference
- An impact score was generated for each attribute by taking the difference between the preference scores for the preferred and non-preferred level of each attribute

## Results

- We recruited 420 MSM and transgender women over 18 years of age from two STD clinics in Lima, Peru in 2013.
- Scores ranged from 53.21 (SD=32.01) to 78.93 (SD=27.63) [Table 1].
- Cost had the highest impact on testing preference (free vs. \$4; impact score=13.29, SD=21.14, p<.0001), followed by potential for false positive result (no false positive vs. some potential for false positive; impact score=13.17, SD=25.91, p<.0001), time-to-result (20 minutes vs. 1 week; impact score=7.63, SD=18.94, p<.0001), and number of blood draws (1 draw vs. 2 draws; impact score=4.69, SD=17.89, p<.0001) [Table 2].

Table 1. Acceptability (mean) of hypothetical HIV and Syphilis tests with different attributes among men who have sex with man and transgender women in Lima Peru. 2014. (n=420)

Test Scenario	Test acceptability mean (SD) <sup>a</sup>	Test Attributes					Potential for False Positive
		Test Type	Blood Draw Method	Number of Blood Draws	Cost	Time to Result	
one	58.39 (32.44)	Rapid	Finger prick	One	S/.12	One Week	No
two	78.93 (27.63)	Laboratory	Finger prick	One	Free	20 Minutes	No
three	58.51 (30.91)	Rapid	Venipuncture	One	Free	One Week	Yes
four	53.21 (32.01)	Laboratory	Venipuncture	One	S/.12	20 Minutes	Yes
five	47.80 (32.58)	Rapid	Finger prick	Two	S/.12	20 Minutes	Yes
six	53.81 (33.90)	Laboratory	Finger prick	Two	Free	One Week	Yes
seven	75.00 (29.11)	Rapid	Venipuncture	Two	Free	20 Minutes	No
eight	53.69 (33.15)	Laboratory	Venipuncture	Two	S/.12	One Week	No

Abbreviation: SD, standard deviation

<sup>a</sup> Test acceptability score is based on a 5-point Likert scale converted to 0-100 point scale.

Overall test acceptability: 59.91 (SD: 19.28)

Table 2. Impact of HIV and syphilis test attributes on hypothetical test acceptability among men who have sex with man and male-to-female transgender women in Lima Peru. 2014. (n=420)

Test Attributes	Attribute values	Acceptability of testing with preferred attribute (mean)	Acceptability of testing with non-preferred attribute (mean)	Impact on testing acceptability - Mean (SD)
Cost*	Free vs. \$4	66.56	53.27	13.29 (21.14)
Potential for False Positive*	No vs. Yes	66.50	53.33	13.17 (25.91)
Time to Result*	20 minutes vs. 1 week	63.74	55.10	7.63 (18.94)
Number of Blood Draws*	1 vs. 2	62.26	57.57	4.69 (17.89)
Blood Draw Method	Finger prick vs. Venipuncture	59.73	60.10	-0.37 (18.03)
Test Type	Rapid vs. Laboratory	59.93	59.91	0.01 (13.02)

\* p<0.001 for the one sample t-tests

Abbreviation: SD, standard deviation

Scores were converted from preferences described using a 5-scale Likert to scores on a 100-point scale.

## Discussion

- HIV and syphilis testing preferences for a high-risk group in Peru prioritized cost, accuracy, timeliness and number of blood draws.
- Implementing an accurate and low cost dual rapid testing strategy for HIV and syphilis could improve screening uptake and accessibility of testing to accelerate time to treatment.



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