

HIV Testing Triples over Five Years Surveillance among HIV-Negative Female Sex Workers in Iran: The Findings of a Bio-Behavioral Survey in 2015

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Introduction

Sexual transmission of HIV in Iran accounted for about one-third (36.8%) of all cases diagnosed in 2013. Female sex workers (FSWs) are one of the key populations at risk for HIV risk.

Frequent HIV testing among key populations, including FSWs has been shown to be effective to control the HIV epidemics in both key and the general populations.

HIV testing uptake among FSWs in Iran has been understudied. In the present study, we estimated the prevalence of recent and lifetime HIV testing among FSWs in two national surveys of FSWs, conducted in 2010 and 2015. Then, we evaluated the individual factors that associated with recent HIV testing in survey 2015.

Methods

In 2015, we recruited 1337 FSWs (1185 from facility and another 152 from venues by outreach) from 13 cities (20 sites). Among them 1304 participants were HIV negative who included in the study. Behavioral data also HIV testing history were collected by face-to-face interview. Recent HIV testing was defined as tested and received results in last 12 months. Four different variables included in the study:

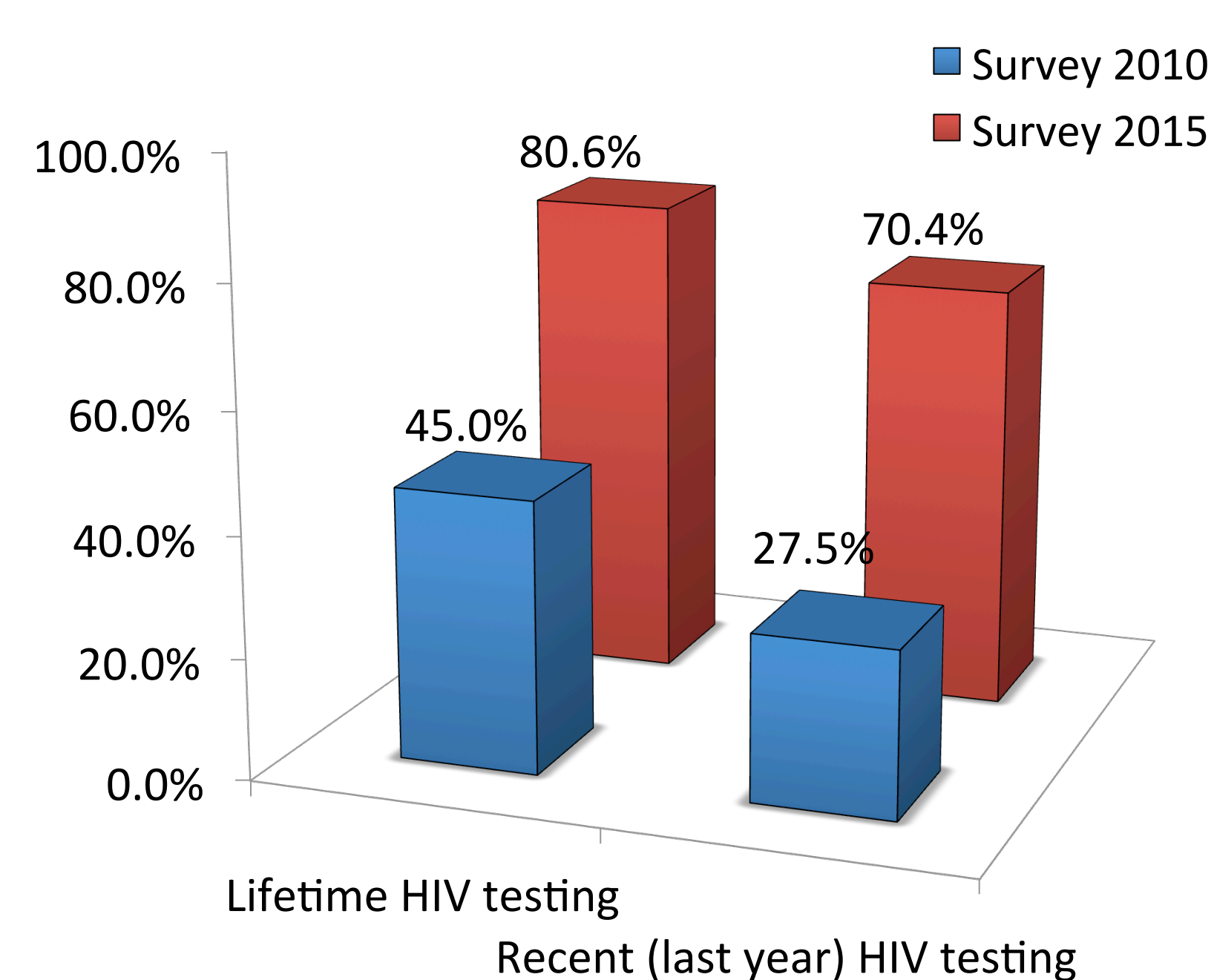
- **Predisposing factors** (i.e. age, marital status, education, housing status, primary solicitation venue).
- **Need factors** (i.e. number of paying and non-paying partners, condom use with all sex partners, drug injection).
- **Enabling factors** (i.e. free condom received, health service utilization, knowing a site for HIV testing)
- **Reinforcing factors** includes perceived health-care stigma.

We used the bivariate and multivariable modified Poisson regression approach using a generalized linear model (GLM) with Poisson as family, and log link function. We reported the effect measure as crude and adjusted prevalence ratios (PRs) along with 95% confidence intervals (CIs).

Results

• HIV testing in 2010 and 2015

Lifetime and recent HIV testing were 45% and 27.5% in 2010; while they were estimated at 80.6% and 70.4% in 2015, respectively (Figure 1).



• Reasons for being and not being tested

The most common reasons for being tested were “concerns about HIV” (83.2%) and “suggested by a health worker” (36.9%); while the most common reasons for not being tested were “not considering herself at risk for HIV” (32.8%), “did not know an HIV testing site” (28.3%), and “lack of time for testing” (20.9%).

• Recent HIV testing in FSWs subgroups

Those who were recruited from facilities, higher educated, had a history of incarceration, had sufficient HIV knowledge, reported higher number of partners and clients, received free condom and used condom consistently and those who knew a place for HIV testing were more likely to be tested for HIV recently (Table 1).

Table 1: Recent HIV testing in sub-groups of FSWs in 2015, Iran

Variables	Recent HIV testing		Adjusted Model PR (95% CI)
	% (95% CI)	P-value	
Type of sample		<0.001	
Facility-based	75.1 (62.7,84.4)		Ref
Outreach	34 (22.8,47.4)		0.6 (0.4, 0.8)
Education		0.02	
Illiterate	58.1 (39.4,74.7)		
Primary school or less	67.5 (52.8,79.4)		
Middle and high school	73.1 (64.1,80.5)		
Diploma and above	78.6 (67.5,86.6)		
Been incarcerated lifetime		0.04	
No	67.8 (56.2,77.6)		Ref
Yes	78 (65.4,86.9)		1.1 (1.0, 1.2)
Comprehensive knowledge		0.01	
Insufficient	68.5 (57.7,77.6)		
Sufficient	77.9 (67.4,85.7)		
Past-month # of paying partners		0.04	
0	64.6 (53.2,74.5)		Ref
1	70.3 (56.0,81.5)		1.01 (0.9, 1.1)
2-5	66.5 (52.1,78.4)		0.9 (0.8,1.5)
6+	80.2 (68.7,88.2)		1.2 (1.05, 1.3)
Past-month # of non-paying partners		0.03	
0	72.1 (62.2,80.3)		Ref
1	66.7 (52.7,78.2)		0.8 (0.8, 0.9)
2+	78.5 (70.3,84.9)		1.07 (1.0, 1.1)
Past-month condom use with partners		0.004	
Consistent	79.2 (69.1,86.5)		
Inconsistent	69.2 (59.1,77.8)		
Free condom received in last year		<0.001	
No	43.1 (31.8,55.2)		Ref
Yes	80.3 (72.5,86.4)		1.3 (1.1,1.6)
Past-year health service utilization		<0.001	
No	46.2 (29.6,63.6)		Ref
Yes	76.9 (68.6,83.5)		1.3 (1.1, 1.7)
Knowing a site for HIV testing		<0.001	
No	10.2 (4.7,20.4)		Ref
Yes	77.7 (69.4,84.2)		4.8 (2.6, 8.6)

Conclusion and recommendation

- More than two-third of the FSWs in Iran reported recent HIV testing in 2015; a number that is considerably improved since 2010.
- FSWs who were not linked to the services (recruited from venues by outreach workers), had one non-paying partner, and reported inconsistency condom use were less likely to be tested for HIV recently.
- While these findings are promising and show improvement over a short period of time, scaling up the rapid HIV testing should be continued, particularly by mobile and outreach approaches.

References

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