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## Care seeking for STI symptoms in Pakistan

Adnan Ahmad Khan,<sup>1</sup> Naghma-e-Rehan,<sup>2</sup> Kanwal Qayyum,<sup>3</sup> Ayesha Khan<sup>4</sup>

Research and Development Solutions, Islamabad,<sup>1</sup> Research Associates, Lahore,<sup>2</sup> The Family Health International, Lahore,<sup>3</sup>  
The National Aids Control Programme, Islamabad,<sup>4</sup> Pakistan.

### Abstract

**Objective:** To estimate the frequency of Sexually Transmitted Infections (STIs) among sex workers and drug users in Pakistan.

**Methods:** Interviews were conducted on 3640 sex workers, injection drug users and truckers about STI symptoms within the past year and currently and the care they sought for them.

**Results:** Nearly half (46%) reported STI symptoms in the past 12 months and 55% went for treatment. Most of the care sought was from the private sector and more by IDUs and female sex workers. Increasing age or having a genital ulcer predicted care seeking.

**Conclusions:** The results suggest the need to understand the factors determining care seeking among members of high risk groups; and emphasizing the role of the private health care providers in treatment and control of STIs (JPMA 59:628; 2009).

### Introduction

Most of the 340 million new infections with sexually transmitted infections (STIs) occur in developing countries.<sup>1</sup> They contribute significantly to the burden of disease in these countries and some such as HIV are now considered the main developmental issue in some countries. While HIV or STI epidemics are nascent in Pakistan, global lessons suggest that this is the best time to control these epidemics. Control of such epidemics will require prevention of new infections and prompt treatment of current infections to avoid development of their reservoirs within communities.

Treatment of infections is only possible when those infected seek care. Since care is sought when symptoms are perceived to be due to these infections, understanding how these symptoms are perceived or care is sought is crucial to control of STIs. Additionally, those seeking care for STI symptoms may reduce their risky sexual behaviours following clinic attendance<sup>2</sup> and their access to care providers is an opportunity to deliver prevention interventions.

STI care seeking or provision and the effect of symptoms patients' care seeking behaviour are poorly understood in Pakistan. A 2001 study of 2400 women seeking antenatal care found that over 63% described at least one symptom that could have been due to an STI, and yet none of these women had sought care for it.<sup>3</sup> Finally most resources for STI control and treatment are placed in the public sector.

Yet over 70% of all healthcare spending in the country is in the private sector.<sup>4</sup> Anecdotes suggest that majority of STI care is also found in the private sector and may even involve non-formal providers such as traditional healers. If these are verified, a major paradigm shift is needed in public health resources allocation for STI control.

### Methods

A secondary analysis of the data from a cross-sectional study conducted in 2004 was performed. Its design has been described previously.<sup>5</sup> Briefly, 807 Male sex workers (MSWs); 824 Female sex workers (FSWs); 408 Transgenders (Hijras); 799 Injection drug users (IDUs); and 802 Truckers were recruited from Karachi and Lahore for a total of 3640 subjects.

Besides in depth questions about sexual practices, protective knowledge and actions,<sup>5</sup> subjects were asked if they had suffered from certain genital symptoms within the past 12 months and what care had they sought for these. The symptoms discussed included: penile, anal or vaginal discharge, genital sores or ulcers and lower abdominal pain; thus corresponding to the symptoms that initiate STI syndromic management algorithms. The study was approved by the ethical review board of HOPE, a non-governmental organization from Karachi and the Family Health International. SPSS version 13 (SPSS Inc, Chicago, USA) was used to perform statistical analysis that included

univariate and multiple regression analyses.

## Results

Our subjects had a median age of 31 (range 12 - 75) years. Most (58%) had no education at all; 43% were married and had an average of 3 (range 1-11) children. They had resided in the city of interview for a median of 20 years.

Of the 3635 subjects that answered about symptoms, 1687 (46%) reported at least one genital symptom during the past 12 months (Table-1). Of these 26% reported one and 20%

of symptoms) showed that only age (probability of seeking care increased by 0.004 for every year of age) and having genital ulcers (Adjusted odds ratio: 1.15, range 1.07 to 1.23) predicted care seeking for genital symptoms.

## Discussion

It was observed that genital symptoms are common among sex workers, IDUs and truckers in Pakistan. A third of these symptoms are not cared for and most of the care is sought from the private sector.

**Table-1: STI symptoms and the proportion of subjects with symptoms, who sought care.**

	FSWs N: 824‡	MSWs N: 807‡	Hijras N: 408‡	IDUs N: 799‡	Truckers N: 802‡	Total N: 3640
Vaginal discharge	447 (55%)					447 (55%)
Lower abdominal pain	464 (56%)					464 (56%)
Urethral discharge		224 (28%)	57 (14%)	243 (31%)	149 (20%)	673 (25%)
Anal discharge		97 (12%)	49 (12%)	257 (32%)	44 (6%)	447 (16%)
Genital ulcer/sore	143 (17%)	116 (14%)	46 (11%)	170 (21%)	88 (11%)	351 (13%)
Had at least one symptom*	580 (70%)	313 (39%)	124 (30%)	440 (55%)	230 (29%)	1687 (46%)
<b>Sought Care</b>						
Sought care for Vaginal Discharge	308 (69%)					308 (69%)
Sought care for lower abdominal pain	333 (72%)					333 (72%)
Sought care for urethral discharge		109 (51%)	32 (62%)	117 (50%)	66 (49%)	324 (51%)
Sought care for anal discharge		41 (46%)	22 (55%)	124 (50%)	22 (52%)	209 (50%)
Sought care for genital ulcer/ sore	107 (77%)	67 (61%)	29 (76%)	98 (67%)	44 (57%)	345 (68%)

\* Some subjects did not answer about care seeking for their symptoms

\*\* Some subjects reported more than one symptom

‡ Some subject did not answer about symptoms. However those not answering vary from 0 - 5 subjects for any symptoms within any of the groups.

reported multiple symptoms.

Among those with symptoms, 936 or 55% sought care (Table-1). FSWs, Hijras and IDUs sought care about a median of 2 days (range: 0 to 56 days) after the symptom developed; MSWs sought care at 3 days (range: 0 to 52) and truckers at 4 days (range: 0 to 42). The median cost of care ranged from Rupees 20 - 200 (IDUs: Rs 20, FSWs: Rs 50, Hijras and Truckers: Rs 150 and MSWs: Rs 200) (1 USD = 60 Rs). Most care was sought from private providers. Care seeking venues are described in Table-2.

A multiple regression model (that included age, education, current marital status, any STIs and specific types

Genital symptoms, including anal discharge were common among the studied subjects, suggesting prevalent STIs<sup>5</sup> and therefore a high potential for STI and HIV transmission among these groups. Frequent anal discharge among IDUs is consistent with field observations of frequent anal intercourse among IDUs, although some may be due to anal prolapse that is also common among IDUs.

Increasing age and having genital sores (presumably herpetic and therefore painful) predicted care seeking. FSWs and IDUs sought most care. Higher care seeking for STIs has been described for brothel based FSWs.<sup>6</sup> Forty five percent of the study subjects did not seek care for their genital symptoms.

**Table-2: Care seeking venues.**

	FSW	IDU	Hijra	MSW	TKR	Total
	N: 577*	N: 416*	N: 113*	N: 311*	N: 213*	N: 1630*
No treatment	173 (30%)	205 (49%)	38 (34%)	150 (48%)	102 (48%)	668 (41%)
Private clinic or doctor	178 (31%)	54 (13%)	42 (38%)	91 (29%)	65 (31%)	430 (27%)
Treatment from traditional healer	52 (9%)	48 (12%)	10 (9%)	30 (10%)	23 (11%)	163 (10%)
Pharmacy/ Drug store	64 (11%)	2 (0%)	4 (4%)	8 (3%)	3 (1%)	81 (5%)
Government hospital or clinic	32 (6%)	12 (3%)	4 (4%)	10 (3%)	4 (2%)	62 (4%)
NGO clinic	0 (0%)	54 (13%)	2 (2%)	0 (0)	3 (1%)	59 (4%)
Advice/treatment from friend	3 (1%)	12 (3%)	2 (2%)	10 (3%)	4 (2%)	31 (2%)
Home remedy	15 (3%)	1 (<1%)	0 (0)	0 (0)	4 (2%)	20 (1%)
Others	59 (10%)	28 (7%)	5 (4%)	6 (2%)	4 (2%)	102 (6%)

\* Some subjects did not answer about their care seeking venues.

This is consistent with international reports suggesting that 9% to 35% of all those with STI symptoms do not seek care.<sup>7-10</sup> However, those that sought care, did so at 2-4 days, which is considerably quicker than the 7 days that has been described internationally.<sup>11</sup> Timely care is crucial for control of STIs transmission in communities. Lack of or a delay in seeking care represent missed opportunities to control STI, as care providers can directly provide interventions such as treatment, counseling and condoms directly to those who have STIs.

Contrary to the belief of many public health specialists in Pakistan, we found that high risk group members with STI symptoms sought care mainly from the private sector and seldom from the public sector or informal sector providers (traditional healers or quacks). These findings are consistent with observations for members of high risk groups in other Pakistani cities<sup>12</sup> and internationally.<sup>7,8,13</sup> However, traditional healers and quacks may be a significant source of STI care for men from the general population.<sup>14</sup> Most of the STI control and treatment resources in Pakistan are currently allocated to the public sector. Our findings suggest the need to re-design STI programmes to include private providers including non-formal providers such as pharmacists, traditional healers, NGOs and even some high risk group members (as peer educators/ providers) in the overall STI control efforts. This will represent a significant paradigm shift that will require research to develop methodology to identify private providers who manage STIs within communities (as not all private providers manage STIs) and to conduct surveillance and HIV or syphilis testing in the private sector which is largely unregulated. A debate will also be warranted about channeling public sector resources such as STI medicines, and condoms via private practitioners.

Our study has several limitations. This is a secondary analysis of data collected to inform about HIV/STI prevalence and risk behaviours. Care-seeking/ STI symptoms were not direct objectives of the study. The questionnaire did not inquire about coital behaviours such as sex acts and condom use while symptomatic. Finally prior experiences with STI care impact care seeking for STIs, however, the study did not inquire about these experiences.

Among high risk group members, genital symptoms are common and many are never managed. Most care that is sought is from the private sector. Future research should focus

on enhancing care seeking among members of high risk groups with genital symptoms and address why some patients with genital symptoms don't seek care. Our findings also highlight the need for a greater role of private practitioners including non-formal healers in STI management and control.

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