

## SEX WORKERS

## Risk of HIV infection among male sex workers in Spain

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**Objective:** To assess HIV prevalence and predictive factors for HIV among male sex workers in Spain.

**Methods:** In this study we analysed all male sex workers who visited HIV testing clinics in 19 Spanish cities between 2000 and 2002. The information was obtained during examination by means of a brief questionnaire. For repeating testers, only the last confirmed result was taken into account.

**Results:** 418 male sex workers were included in the analysis; 58% visited these clinics for the first time and 42% were repeating testers. 67% were of foreign origin, mostly from Latin America (91%). 96% had had sex with men, 18% were transvestites or transsexuals, and 3.3% had used injected drugs. HIV prevalence was 12.2% (95% CI, 9.3 to 15.8%), and rose to 16.9% among first time testers. No differences in HIV prevalence were found between injecting drug users, transvestites/transsexuals, and men from foreign countries.

**Conclusion:** Because of the high risk of HIV infection, male sex workers should be the target of specific preventive activities. Preventive and healthcare strategies that are culturally adapted to migrants are required.

The vast majority of HIV studies and preventive programmes directed to commercial sex workers have centred on women. Many female sex workers in western Europe are immigrants.<sup>1</sup> In Spain, HIV prevalence among those who have never injected drugs is below 1%, and no differences have been detected in relation to the country of origin.<sup>2</sup>

Male sex workers are neither visible nor easy to access. In Spain there are no specific preventive programmes directed to this population group, which may be partially covered by programmes aimed at female sex workers or homosexual men. HIV prevalence among male sex workers has hardly been studied, nor has the presence of immigrant populations. Both aspects need to be investigated in order to design and implement programmes aimed at approaching these groups and preventing HIV among their members.<sup>3</sup>

We thus aimed to assess HIV prevalence and predictive factors for this infection among male sex workers in Spain.

## METHODS

This study is based on a network of 20 HIV counselling and testing clinics, of which 14 also diagnose and treat other sexually transmitted diseases. These clinics are situated in 19 cities with a population of over 100 000 inhabitants throughout the Spanish territory (Alicante, Barcelona, Bilbao, Cartagena, Castellón, Granada, Gijón, Logroño, Madrid, Málaga, Murcia, Oviedo, Pamplona, San Sebastián, Santa Cruz de Tenerife, Santander, Sevilla, Valencia, and Vitoria).

All of them offer voluntary, confidential, and free HIV testing, and some also offer anonymous testing. No legal documents are required, and this facilitates access for immigrants or other groups having difficulties in using the national health service, which is the case with commercial sex workers.

In the present analysis we included all male sex workers who attended these clinics during the years 2000 to 2002. The information was obtained during the examination using a brief questionnaire which included age, country of origin, previous HIV test, heterosexual practices, homosexual practices, transvestite or transsexual, current or previous injecting drug use, and HIV infected sexual partner.

Blood specimens were tested for HIV by an enzyme linked immunosorbent assay, and reactive sera were confirmed by western blot or immunofluorescence. For repeating testers only the last confirmed result was taken into account.

Comparisons of proportions were done with Fisher's exact test;  $p < 0.05$  was considered significant. To measure the association between HIV infection and risk factors, odds ratios (OR) and their 95% confidence interval (CI) were calculated. Logistic regression was used to assess the independent influence of each factor. In this analysis, data were grouped in order to avoid categories with no cases.

## RESULTS

Out of 47 922 patients who were HIV tested during the period 2000–2, 11 098 (23.2%) were sex workers, of whom only 418 (3.7%) were men. The average age of male sex workers was 29.2 years (SD 7.3); 67% came from a country of origin other than Spain, the majority from Latin America (91.4%); 41.9% had previously undergone the HIV test in the same clinic, and this situation was more frequent among Spaniards (55.7%) than among immigrants (33.1%) ( $p < 0.001$ ); 96.2% declared they had sex with men; 7.2% that they had had sexual intercourse with a person they knew to be infected with HIV; and 3.3% that they had used injected drugs, a behaviour which was more common with Spaniards (9.2%) than with Latin Americans (0.8%;  $p < 0.01$ ). Seventy six (18.2%) transvestites or transsexual males were identified, of which 40% were Spaniards and 59% Latin Americans.

Among sex workers who attended these clinics, 147 HIV infections were diagnosed, of which 51 (34.6%) concerned men. HIV prevalence among male sex workers was 12.2% (95% CI, 9.3 to 15.8%), and rose to 16.9% with first time testers, versus 5.7% with repeating testers ( $p < 0.0001$ ). The highest HIV prevalence was found among men who knew they had an HIV infected partner (20.0%) (table 1). No differences in HIV prevalence were found concerning transvestites or transsexuals (14.5%) compared with all other male sex workers (11.7%,  $p = 0.561$ ). The small numbers of injecting drug users, heterosexual men, and individuals from countries other than Spain or Latin America, do not enable us to reach conclusions about the influence of these characteristics. In the multivariate analysis, the HIV prevalence was greater among men who visited the respective clinics for the first time (adjusted odds ratio (OR), 5.2; 95% CI, 2.2 to 12.4)

\*See appendix for complete list of the EPI-VIH Study Group.

**Table 1** HIV prevalence among male sex workers, 2000–2

	Men analysed		HIV infected		p Value
	No	%	No	Prevalence (%)	
<b>Previous HIV test</b>					<0.0001
Yes	175	41.9	10	5.7	
No	243	58.1	41	16.9	
<b>Age (years)</b>					0.8437
≤ 19	17	4.1	1	5.9	
20–24	107	25.6	12	11.2	
25–29	129	30.9	16	12.4	
30–34	74	17.7	12	16.2	
35–39	51	12.2	6	11.8	
≥ 40	40	9.6	4	10.0	
<b>Injecting drug user</b>					0.2347
Yes	14	3.3	0	0.0	
No	404	96.7	51	12.6	
<b>HIV infected sexual partner</b>					0.2394
Yes	30	7.2	6	20.0	
No	388	92.8	45	11.6	
<b>Transvestite or transsexual</b>					0.5605
Yes	76	18.2	11	14.5	
No	342	81.8	40	11.7	
<b>Sex with men</b>					0.2374
Yes	402	96.2	51	12.7	
No	16	3.8	0	0.0	
<b>Area of origin</b>					0.0836
Spain	131	31.3	12	9.2	
Europe	13	3.1	0	0.0	
Latin America	243	58.1	38	15.6	
Africa	10	2.4	0	0.0	
Others/unknown	21	5.0	1	4.8	
<b>Total</b>	<b>418</b>	<b>100.0</b>	<b>51</b>	<b>12.2</b>	

and among those who said they had had sexual intercourse with an HIV infected person (OR, 2.9; 95% CI, 0.9 to 8.9), although this last result was not statistically significant (table 2).

## DISCUSSION

Men represented only a very small percentage of all sex workers who visited HIV testing clinics in Spain; however, they accounted for a third of HIV infections among commercial sex workers. It is known that men use health services less than women,<sup>4</sup> and that they show a higher tendency to hide their commercial sexual relations. Nevertheless, these results support the idea that male

prostitution is a lot less frequent than female prostitution, but that it represents a much higher risk for HIV infection.

The free and easy access to the clinics may have led to an over-representation of the immigrant population, a group with more difficulties in approaching other healthcare facilities. Nevertheless, in a previous study undertaken in Madrid among male sex workers recruited in the street, 35% were found to be immigrants, but in this case, they came predominantly from North Africa.<sup>5</sup> When compared to Spaniards, immigrants had a lower level of education, made less use of condoms and, in their private lives, a greater proportion reported sexual relationships exclusively with women.<sup>5</sup> Another article that analysed 132 male transgender

**Table 2** Logistic regression analysis of predictive factors for HIV infection among male sex workers, 2000–2

	OR	95% CI	p Value
<b>Previous HIV test</b>			
Yes	1	2.19 to 12.40	0.0002
No	5.21		
<b>Age (years)</b>			
< 25	1	0.86 to 4.28	0.1099
25–34	1.92	0.64 to 4.81	0.2742
≥ 35	1.75		
<b>HIV infected sexual partner</b>			
No	1	0.95 to 8.89	0.0624
Yes	2.90		
<b>Transvestite or transsexual</b>			
No	1	0.54 to 2.92	0.8669
Yes	1.25		
<b>Area of origin</b>			
Spain	1	0.52 to 2.89	0.6408
Latin America	1.23	0.02 to 2.43	0.8910
Others	0.23		

## Key messages

- A third of all HIV infections diagnosed among sex workers who visited HIV testing clinics in Spain concerned men
- Two thirds of male sex workers who visited HIV testing clinics in Spain between 2000 and 2002 came from foreign countries, mostly from Latin America. This should be taken into account in order to develop culturally adapted educational, social, preventive, and healthcare strategies
- In Spain, male sex workers show a very high prevalence of HIV infection (12.2%). In consequence they should be the target of specific preventive activities

street sex workers in Madrid found a proportion of 44% of immigrants, mostly from Ecuador.<sup>6</sup>

The HIV prevalence found among the men included in this study (12.2%) was much larger than that observed among female sex workers (0.8%;  $p < 0.001$ ) and homosexual men (5.1%;  $p < 0.001$ ) analysed in the same network of clinics. Other studies have also described high levels of HIV seroprevalence among male prostitutes contacted in the streets (25%)<sup>5</sup> or in sexually transmitted infection clinics (11%).<sup>7</sup> In other cities of the developed world, high but disparate levels of infection have been reported (5%–29%), with variations depending on the proportion of injecting drug users, on work place and sexual practices.<sup>8–14</sup>

Among sex workers analysed in these clinics, men made up a third of the cases diagnosed with HIV. This shows that although we are dealing with a small population group it can play a significant part in HIV transmission.

The prevalence of HIV infection was greater with men who were tested for the first time than with repeating testers. This must be taken into account when results from different studies are compared. First tests detect both prevalent and recent infections, whereas repetitions only detect recent infections among individuals who had probably received counselling along with the previous tests. The greater proportion of immigrants among first time testers may reflect their recent arrival in Spain.

In the female sex worker category, a greater risk of HIV infection has been reported when a sexual partner is diagnosed with HIV, and this has been attributed to the infrequent use of condoms in non-commercial sexual relations. This circumstance may also hold for the men in this study,<sup>5, 6</sup> although the information necessary to evaluate this was not available.

In conclusion, although male sex workers constitute a small population group, they seem to be exposed to high risk situations and may have a relevant role in the transmission of HIV infection among homo/bisexual men, this being supported by their very high prevalence of HIV infection. Thus, male sex workers should be the target of specific preventive activities. Seemingly, the high proportion of sex workers that we found to be immigrants requires the development of educational, social, preventive, and healthcare strategies that are culturally adapted to this group. Studies concerning knowledge, attitudes, and behaviours of male sex workers are necessary to assess appropriate interventions.<sup>15</sup>

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Analysis and writing committee: MJB, PS, and JC; members of the EPI-VIH Study Group designed the study, attended patients, filled the questionnaires, performed the serological determinations, extracted the data and created the database, and all of them approved the final version of the paper; MJB, PS, and JC are guarantors.

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## APPENDIX

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## Notices

### 10th European Forum on Quality Improvement in Health Care

This forum will be held on 13-15 April 2005 at the ExCel Conference Centre, London, UK. An early bird discount available if you register before 25th February 2005. For further information, please visit: <http://www.quality.bmjpg.com>

### 22nd International Papillomavirus Conference and Clinical Workshop

This workshop will be held on 29 April - 6 May 2005 in Vancouver, Canada. Topics will include: topics animal papillomaviruses, diagnosis, epidemiology, HPV-associated neoplasia in the developing world, immunology, molecular pathogenesis, natural history, screening, transcription, and treatment. For further information, please contact: 22nd IPC Secretariat, C/o Venue West Conference Services Ltd., #645-375 Water Street, Vancouver, BC, V6B 5C6, Canada (email: [congress@venuewest.com](mailto:congress@venuewest.com); tel: +1 604 681 5226; fax: +1 604 681 2503; <http://www.hp2005.org>).

### 16th Biennial Meeting of the International Society for Sexually Transmitted Diseases Research (ISSTD)

This meeting will be held on 10-13 July 2005 in Amsterdam, The Netherlands. Abstract deadline is 31st March. For further information, please contact: Ms Maria Oud, Scientific Secretariat (email: [moud@gggd.amsterdam.nl](mailto:moud@gggd.amsterdam.nl); tel: +31 (0)20 555 5296; fax: +31 (0)20 555 5775; <http://www.isstdr.org>).