





In 1993, the monitoring of behaviours related to the transmission of HIV/STIs was introduced as part of SIVES. Up until the present, transverse biennial studies of MSM, IDUs and from 2005, FSW have been carried out.

### 3.1. The monitoring of the prevalence of HIV infection and the sexual behaviours associated with its transmission in men who have sex with men

#### 3.1.1. The prevalence of risk behaviours associated with HIV/STI infection in men who have sex with men recruited on the Internet

The use of the Internet amongst MSM as a method of contacting sexual part-

ners has increased significantly in recent years. Diverse studies have found evidence of the association which exists between the use of the Internet to contact partners and risky sexual behaviours within this group [1-2]. As part of the studies of behavioural monitoring in MSM, from October 2008 until February 2009, an anonymous survey of MSM resident in Spain was carried out through www.sexhom.info by means of the diffusion of Banners on gay websites and links pages, advertisements in gay magazines, and newsletters to the members of the Coordinadora gaislesbiana (Gay and Lesbian Coordination Group of Catalonia). The objective of this study was to describe the socio-demographic and behavioural characteristics of the interviewees and to compare the socio-demographic, behavioural and self reported prevalence of HIV and STIs amongst those who reported having contacted sexual

partners through the Internet with those who had not. The comparison of proportions was carried out by means of Pearson's chi-square ( $\chi^2$ ) test and Fisher's Exact test, stratifying the variable age ( $\geq 30$  years old vs.  $< 30$  years old) [3].

Of the 1,268 people who entered in the website, 97 did not answer the survey, 32 surveys were eliminated and 1,138 participated in the study. The average age of the participants was 32 years old (DE: 10 years) and 70% reported having used the Internet to contact sexual partners in the previous 12 months (74.2% amongst  $< 30$  years old and 66.3% amongst  $\geq 30$  years old). The main socio-demographic and behavioural characteristics and the prevalence of HIV and STIs according to age are shown in **table 3.1.1**.

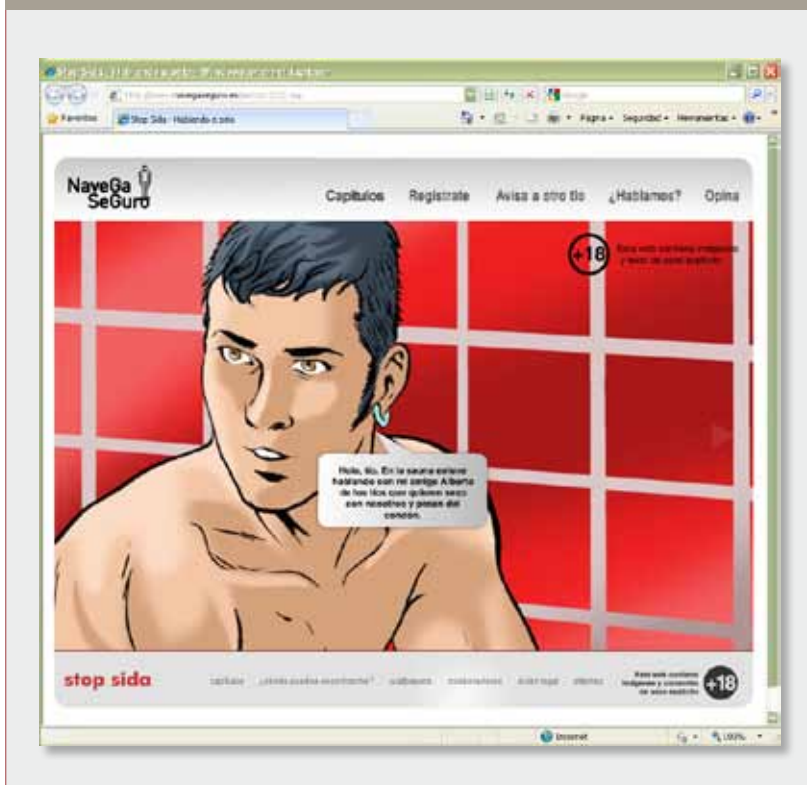
In those younger than 30, those who had used the Internet had, in com-

Table 3.1.1. Sociodemographic and behaviour characteristics and HIV and STI prevalence in MSM interviewed through the internet.

	Younger than 30 years old			30 years old or older		
	Internet user n=388	Don't internet user n=135	P	Internet user n=399	Don't internet user n=203	P
	%	%		%	%	
Immigrants	12.4	10.4	ns	13.8	19.7	ns
Education: Secondary/Higher	93.8	90.4	ns	94.7	91	ns
Living in Catalonia	54.4	63.6	ns	66.2	78	0.003
Sexual orientation: homosexual	79.1	77.8	ns	83.5	82.8	ns
Drugs use before or during sexual intercourse*	42.1	30.4	0.016	54.3	36.5	<0.001
More than 10 male sexual partners*	46.0	11.9	<0.001	60.4	26.9	<0.001
UAI steady partner (1)*	60.9	71.3	ns	65.7	67.7	ns
UAI occasional partner (2)*	36.6	34.2	ns	36.8	32.6	ns
HA paid for sex*	4.9	1.5	ns	14.3	6.9	0.008
Have been paid for sex*	10.8	1.5	0.001	6.0	1.0	0.004
To met sexual partners in other places than the internet*	74.5	28.1	<0.001	82.2	42.4	<0.001
HIV testing (at least once)	59.5	52.6	ns	82.2	81.8	ns
Self reported HIV prevalence (3)	6.3	5.8	ns	18.7	20.9	ns
STI (at least once)	31.2	16.3	0.001	51.6	45.4	0.032

ns: non significant. / (1) Among those with steady partner. / (2) Among those with occasional partner. / (3) Among those who have been HIV tested and know the results.  
\* Last 12 months.

Image 3.1. New technologies are spreading quickly in our society and the internet is becoming as a new mean targeting prevention interventions, especially in MSM.



parison with those  $\geq 30$  years old, a higher number of partners (46% more than 10 partners vs. 11.9%), higher drug use before or during sexual relations (42.1% vs. 30.4%) and a higher proportion declared having charged money in exchange for having sexual relations (10.8% vs. 1.5%). In those of 30 years old or above, those who had used the Internet also had a higher number of sexual partners (60.4%  $> 10$  partners vs. 26.9%), higher drug use before or during sexual relations (54.3% vs. 36.5%), and a higher proportion which stated that they had charged (6% vs. 1, 0%) and had paid (14.3% vs. 6.9%) in exchange for sexual relations. (14.3% vs. 6.9%). There was

no difference in unprotected anal intercourse (UAI) with regular partners and occasional partners amongst those who had contacted partners on the Internet and those who had not. Globally, the prevalence of UAI with occasional partners was 36% for both those younger than 30 years old and those who were 30 years old or above. In both age groups, those who had contacted sexual partners on the Internet also contacted sexual partners, in a higher proportion, in other places such as saunas and gay bars (74.5% in  $< 30$  years old and 82.2% in those of 30 years or above), and with respect to those men who had not used the Internet (28.1% in  $< 30$  years old and 42.4% in those of 30 years or above).

The prevalence of self reported HIV amongst those who had taken a HIV test and knew the result was also no different between those who had contacted partners on the Internet and those who had not. Globally, the prevalence of self-reported HIV was higher amongst the older group (6.1% in those younger than 30 and 19.7% in those aged 30 or older). On the other hand, the prevalence of having had an STI (at some time) was higher amongst those who contacted partners on the Internet than those who did not, both amongst the youngest group (31.2% vs. 16.3%) and the men of 30 years or above (5.6% vs. 45.4%).

Within the limitations of the study emphasis must be placed on not being able to generalise about the results of the whole group of MSM and the possible under-reporting of risk behaviours and the prevalence of HIV/STIs. However, it has been seen that the anonymity which the Internet offers improves the quality of the data collected [4].

### 3.1.2. Monitoring the prevalence of HIV infection and the associated behaviours with its transmission in men who have sex with men

Since 1993, and with a biennial periodicity, seven transverse studies have been carried out with the participation of a male homosexual community organisation (the association Stop Sida) [5]. The most recent evaluation was taken during the months of October, November and December 2008. The new develop-

ment of the latest study is that it was a multicentre study with the aim of obtaining valid and reliable information about the prevalence of HIV, syphilis, risk behaviours and cultural factors in MSM by means of the collection of non-invasive biological samples in countries in the Southern and Eastern Europe. (SIALON Project. *Capacity building in HIV/Syphilis prevalence estimation using non-Invasive methods among MSM in Southern and Eastern Europe, financed by the European Commission Public Health Programme 2003-2008*). This development supposes some methodological modification which can affect the comparability of the other evaluations presented in previous SIVES. In 2008, the Time-location Sampling (TLS) method was used; the difference to previous years being that it is a probabilistic method which assures a greater diversity of the MSM population [6-7]. 400 MSM who attended gay meeting places and cruising areas in the city of Barcelona participated during previously defined time slots in the collection of bio-behavioural information. They were given a self-administered questionnaire, which was voluntary, confidential and anonymous, in which they were asked about their behaviours in the 6 months prior to the study (the main difference to previous years is the reference period, which had been 12 months). Samples of oral fluid were also collected to estimate the prevalence of HIV and syphilis infection [8-9].

In 2008, the study population was younger than that measured in 2006, but a higher median age (38 years) was still observed amongst the par-

Table 3.1.2. Sociodemographic characteristics and HIV testing. MSM, 1995-2008.

	1995	1998	2000	2002	2004	2006	2008
	N=741	N=713	N=828	N=640	N=728	N=868	N=400
	%	%	%	%	%	%	%
<b>Mean age [DE]**</b>	33.7 [8.7]	34.8 [8.7]	36.1 [8.7]	37.4 [9.3]	38.6 [9.7]	41.2 [9.9]	38.2 [102]
<b>Education</b>							
Higher*	44.3	47.7	48.9	47.9	50.3	53.5	55.9
<b>Employment</b>							
Work*	83.1	71.2	76.1	73.8	85.1	85.4	83.5
Unemployment	8.0	4.4	3.5	5.2	3.9	4.1	6.1
Student*	8.8	6.3	6.3	4.3	3.8	1.5	4.6
Others*	–	16.9	14.2	16.7	7.1	9	5.9
<b>Residence</b>							
Big city	67.0	71.0	69.5	70.9	68.9	73.9	80.2
<b>Sexual orientation</b>							
Homosexual*	–	–	–	–	88.8	89.0	84.5
Bisexual*	–	–	–	–	8.3	8.5	14
Others	–	–	–	–	2.9	2.5	1.5
<b>Nacionality</b>							
Spanish	–	–	–	–	–	73.5 <sup>g</sup>	72.4
Others	–	–	–	–	–	26.5	27.6
<b>Previous HIV testing</b>							
Yes*	67.1	75.5	78.0	82.6	81	86.5	88
<b>Self-reported HIV prevalence</b>	16.4	16.6	18.8	17.1	17.3	19.7	11
<b>HIV prevalence in oral fluid samples (1)</b>	14.2	15.5	17.9	18.3	24.0	19.8	20.4

\* Significant  $\chi$  trend. / \*\* Significant ANOVA. / <sup>g</sup> 2006: Country of origin. / (1) Selection the same venues than last years.

ticipants. As in previous years, the majority of the participants had a high level of education (55.9% were university educated) and reported themselves to be working (83.5%). 80.2% lived in a large city. The majority of the men defined themselves as homosexual, this percentage being smaller with respect to 2006 (84.5%), while the percentage of MSM who defined themselves as bisexual increased (14%). A quarter of the MSM interviewed were of foreign nationality, mainly from Latin America

(68% of the total of foreigners) (table 3.1.2). The percentage of men who had on some occasion taken a HIV test showed a tendency to increase in successive studies (88% in 2008). Amongst these, the prevalence of self reported HIV in 2008 was 11%, notably less than the other figures. On the other hand, the prevalence of HIV infection based on the oral fluid samples presented a significant growing tendency during the period 1995-2008 (from 14.2% in 1995 to 20.8% in 2008). Of the HIV-positive

men, 38.5% stated having received a negative result in the last 12 months (table 3.1.2).

Forty-one point for percent (41.4%) of the men interviewed in 2008 had had more than 10 male sexual partners in the previous 6 months. The proportion of men who had had sexual relations with regular or occasional partners, respectively, was inferior to previous years (53.4% and 83% in 2008), possibly due in part to the difference in the reference periods. Although it does not follow

a statistically significant tendency, the percentage of men who had paid money for sex during the last year, as in previous years, was higher than the percentage of those who had charged for sex (7.5% and 5.9%, respectively) (table 3.1.3). The frequency of contacts made on the Internet was similar to that of 2006 (46.3% in 2006 and 2008, respectively).

In 2008, 94.5% of interviewed men practised anal penetration with the regular partner and 93.5% practised it with occasional partners. The least

frequent practise and the one which presented most differences according to the type of partner was oral sex with ejaculation in the mouth (57.7% with regular partner and 41.7% with occasional partner). The practice of UAI, or the occasional or none use of condoms, shows a rising tendency through the years, although the frequency is different depending on the type of partner. Sixty two point two percent (62.2%) of the men surveyed in 2008 had practised UAI at some time with their regular partner and 38% with an occasional partner (figure 3.1.1). UAI with the regular partner varied according to the serostatus of the partner. It was a frequent practice above all amongst the concordant negative couples (74.7%), but also amongst the concordant positive couples (66.7%) or amongst those in which one or both of the couple did not know their serostatus (61.3%). It should be emphasised that a quarter of discordant couples had practised UAI in the previous 6 months (26.1%).

Table 3.1.3. Sexual behaviour. MSM 1995-2008.

	1995 (1) N=741	1998 (1) N=713	2000 (1) N=828	2002 (1) N=640	2004 (1) N=728	2006 (1) N=868	2008 (2) N=400
	%	%	%	%	%	%	%
Steady sexual partner*	63.7	65.4	63.8	57.9	56.5	55.4	53.4
Occasional sexual partner*	85.2	87.4	89.9	90.1	91.4	91.7	83.0
Have paid for sex	14.5	13.2	13.4	14.6	13.3	15.5	7.2
Have been paid for sex	5.4	2.9	4.0	7.7	5.6	4.0	5.9

(1) Last 12 months. / (2) Last 6 months. / \* Significant  $\chi^2$  trend.

Figure 3.1.1. Condom use frequency in anal sex with steady and occasional partners. MSM, 1995-2008.

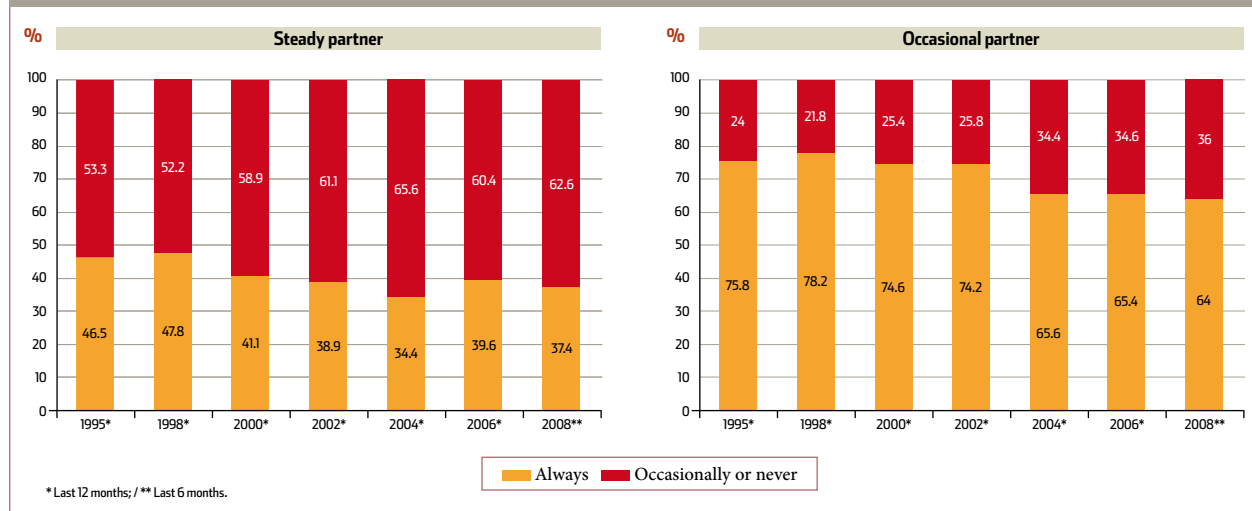
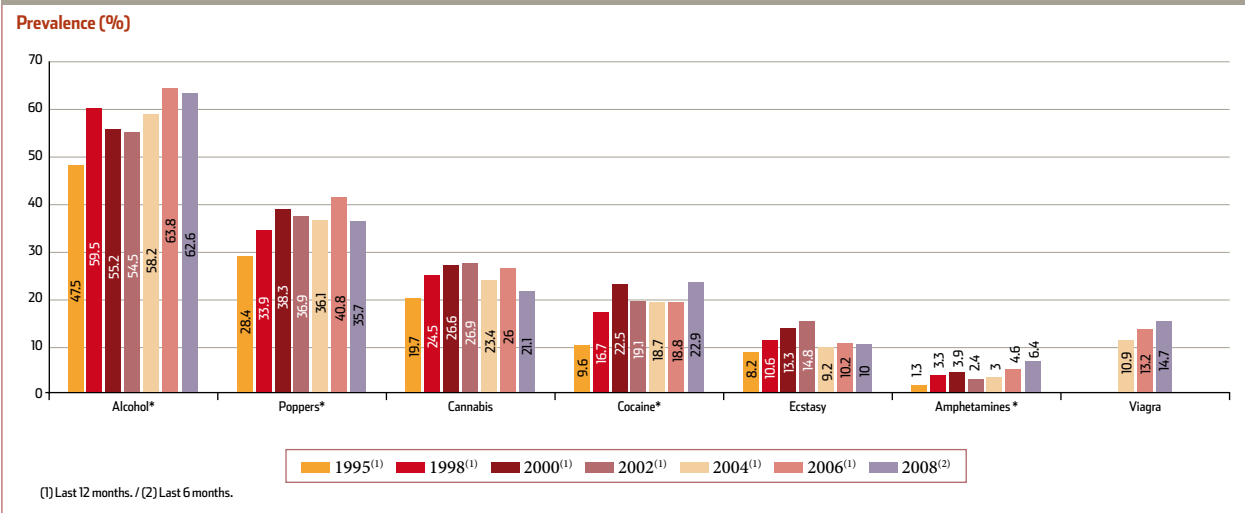


Figure 3.1.2. Drugs use prevalence before or during sexual intercourse. MSM 1995-2008.



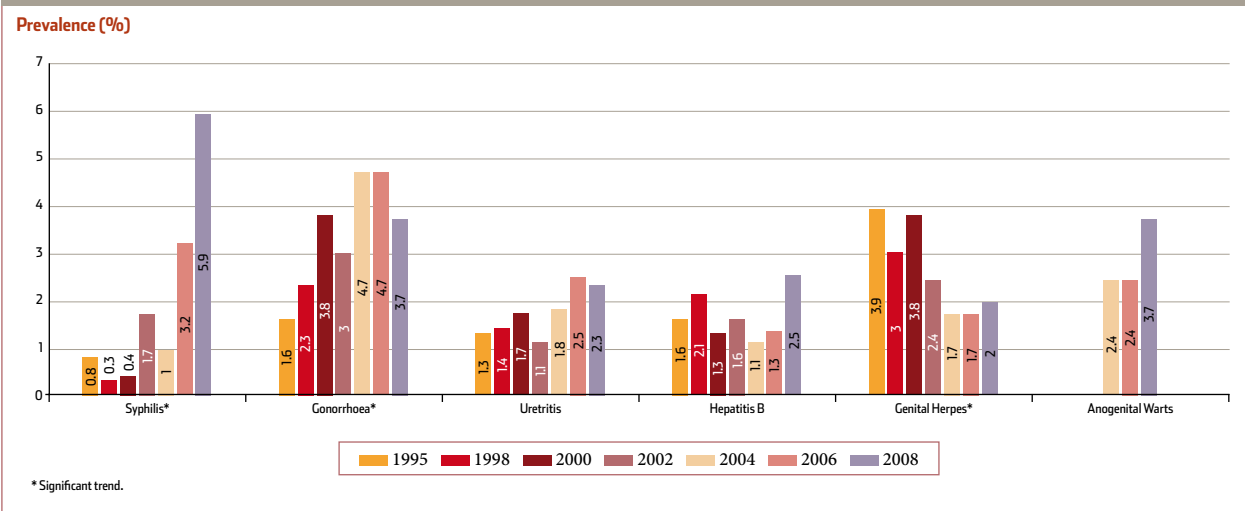
Alcohol consumption before or during sexual relations within the last 6/12 months tended to increase significantly over the years, more clearly than for other substances (62.2% in 2008). However, drug-use also increased significantly, such as inhaled nitrates or poppers, cocaine and amphetamines, poppers, being as in previous years the most consumed substance. (35.7%)

(figure 3.1.2). At least 15% of the interviewed MSM had had an STI in the previous year. The proportion of men who had been diagnosed with syphilis in the last 12 months demonstrated a significant increase in successive studies (0.8% in 1995 to 5.9% in 2008), contrary to what happened with the proportion of herpes which decreased. The frequency of gonorrhoea was also

amongst the highest over time (3.7% in 2008) (figure 3.1.3).

The main limitation of the study is the difficulty to extrapolate the results to the MSM population which does not go to gay meeting places and cruising areas, despite the change of methodology which offered a more representative sample of the popu-

Figure 3.1.3. STI diagnosed last 12 months. MSM, 1995-2008.



lation which did go. Likewise, the change of methodology makes comparability with data from previous years difficult. Other limitations, in common with previous evaluations, are memory biases and the under-reporting of risk behaviours and the prevalence of self-reported HIV.

### 3.2. The monitoring of the prevalence of HIV/HCV/STIs and the behaviours associated with their transmission in injecting drug users (IDUs)

The different behavioural monitoring studies carried out in CEEISCAT have since 1993 employed samples of IDUs on the street, in areas where drugs are sold and consumed. Analysing the current situation of drug-taking, through the methodology used in these studies, each time a more deteriorated injecting population with more years of drug-use was selected, as they are usually more visible in these areas. In this context, the measurement most recently taken between October 2008 and March 2009 varied the inclusion criteria and selection methodology of the participants to obtain a more representative sample of the injecting population of Catalonia, including a subsample of IDUs from other countries. In contrast to previous years, the IDUs were selected from all Catalonia in harm-reduction centres, through a stratified multi-phase sampling stratifying by centre type (according to the estimated percentage of immigration it was > or not than 5%) and by country of ori-

Table 3.2.1. Sociodemographic characteristics and HIV and HCV testing in IDU.

	Spanish N=439	Immigrants N=309	Total N=748	p
	%	%	%	
<b>Mean age [DE]</b>	38.5 [7.1]	33.4 [6.9]	36.4 [7.5]	<0.0001
<b>Men</b>	78.1	88.0	82.2	<0.0001
<b>Education</b>				<0.0001
Primary or less	31.7	15.7	25.1	-
Secondary	67.1	66.0	66.7	-
Higher	1.1	18.3	8.2	-
<b>Employment (last 6 months)</b>				<0.0001
Salaried	22.6	24.1	23.2	-
unemployed	40.6	56	47	-
Pension	28.1	4.9	18.5	-
Other situations: prison, burglar, sex work, etc.	8.8	15	11.3	-
<b>Homeless (last 6 months)</b>	19.1	35.3	25.8	<0.0001
<b>HIV testing (ever tested)</b>	94.5	81.4	89.1	<0.0001
<b>Self-reported HIV prevalence (1)</b>	40.0	14.6	30.5	<0.0001
<b>Self-reported HCV prevalence</b>	90.8	85.2	88.5	0.051
<b>Self-reported HCV prevalence (1)</b>	78.3	67.3	74.0	0.002

(1) Among those who have been tested and know the results.

gin within each centre. The inclusion criteria were that participants had injected drugs at some time during the previous 6 months. For the behaviour study, a standardised and anonymous interviewer-administered questionnaire was used, developed by the WHO [10]. With previous informed consent, samples of oral fluid were anonymously collected, to determine the prevalence of HIV [11] and HCV [12] infection, and urine to determine the prevalence of *Chlamydia trachomatis* and *N. gonorrhoea*, respectively, through the real-time PCR technique (Abbott RealTime PCR CT/CG CE).

This section describes the main indicators collected in this last study,

comparing according to the country of origin of the injectors (Spanish and immigrants) by means of Pearson's  $\chi^2$  test and Fisher's Exact test for the qualitative variables and Student's t test for the quantitative variables.

A total of 748 injectors were interviewed (50.7% recruited in centres in Barcelona city, 36.6% in the Barcelona metropolitan area and 12.7% in other provinces of Catalonia). According to place of origin, 439 (58.7%) were Spanish, 176 (23.5%) were from Eastern European countries, 69 (9.2%) came from other European countries, 49 (6.6%) from Africa and the rest (2%) from the USA and the Middle East. The in-

jectors' median age was 36 years, the immigrants being the youngest (33 years). The percentage of men was greater amongst the immigrants (88% vs. 78.1%), as well as the percentage which reported having studied at university (18.3% vs. 1.1%). Almost half of the interviewees were receiving unemployment benefits and 25.8% lived on the street, the percentages being greater amongst the immigrants. Almost the majority of the injectors had taken a HIV test at some time and amongst these, the self-reported prevalence of HIV was 40%. Amongst the immigrants who had taken the test and knew the result (81.4%), the prevalence of HIV was less (14.8%). The prevalence of HCV was not shown to be statistically significantly different amongst the native injectors and the immigrants (a global prevalence of 74.9%) (table 3.2.1).

At the time of the interview, almost half of the interviewees were in treatment for their drug addiction, the percentage being lower amongst the immigrants (32.5%). The Spanish injectors had been injecting drugs for on average 18.1 years, while the immigrants had been injecting for less time (10.8 years). The most injected drug amongst Spanish injectors was cocaine (42.5%) and amongst the immigrants it was heroin (40.3%) and the frequency of injection was higher amongst the immigrants (57.6% of the immigrants and 43.7% of the Spanish injected daily) (table 3.2.2).

With regards to the risk behaviours related to the injection of drugs, the prevalence of accepting and passing on syringes in the last six months was 19.4% and 22.9%, respectively, with-

out observing differences according to country of origin. Neither was the prevalence different of sometimes sharing injection material indirectly, such as the practice of often giving or receiving drugs dissolved in another syringe which had been previously used (known as front/back loading) (49.9%) and the sharing of other material such as the spoon, the filter, or the water used to prepare the dose (54%) (figure 3.2.1).

Approximately half of the injectors had sexual relations with regular partners (48.3%) and 34.4% with occasional partners. A significant proportion of the regular partners were also IDU (42.6%). Of the total interviewees, 7.4% reported having had sexual relations in exchange for money or drugs in the last 6 months, women forming the larger group in this case: 2.1% of men and 31.6% of women (table 3.2.2). The prevalence of the consistent use of condoms, which is to say

the percentage who reported having always used them in sexual relations in the last 6 months, was not seen to be significantly different between the native injectors and the immigrants. In general, 29.2% used condoms consistently with regular partners, 66.9% with occasional partners and 69.1% with clients (figure 3.2.2).

The prevalence of HIV in the samples of oral fluid collected was higher amongst the Spanish (43%) in comparison with the immigrants (22.4%). On the other hand, the prevalence of HCV showed no significant difference according to country of origin (global prevalence of 74.9%). As for the prevalence of *Chlamydia trachomatis* in the urine samples analysed, it was 2.3%, being slightly higher amongst the immigrant injectors (3.6%). No significant differences in the prevalence of *N. gonorrhoea* according to country of origin was observed, with a global prevalence of 0.7% (table 3.2.3).

Table 3.2.2. Drugs use characteristics and sexual behaviour (last 6 months) in IDU.

	Spanish N=439	Immigrants N=309	Total N=748	p
	%	%	%	
<b>Addiction treatment</b>	59.7	32.5	48.5	<0.0001
<b>Years (mean) of injection of intravenous drugs consumption [DE]</b>	18.1 [8.7]	10.8 [6.7]	15.1 [8.7]	<0.0001
<b>More frequent injected drugs</b>				<0.0001
Heorine	41.3	40.3	40.9	-
Cocaine	42.5	23.1	34.5	-
Speedball (heroin+cocaine)/Others	16.2	36.6	24.6	-
<b>Everyday injection of intravenous drugs</b>	43.7	57.6	49.5	<0.0001
<b>Sexual intercourse with steady partner</b>	47.2	50	48.3	ns
<b>IDU steady parnter</b>	41.5	44.2	42.6	ns
<b>Sexual intercourse with occasional partner</b>	31.9	37.9	34.4	ns
<b>Sexual intercourse with clients</b>	8.5	5.8	7.4	ns

Figure 3.2.1. Prevalence of sharing injection of intravenous drugs material in IDU (last 6 months).

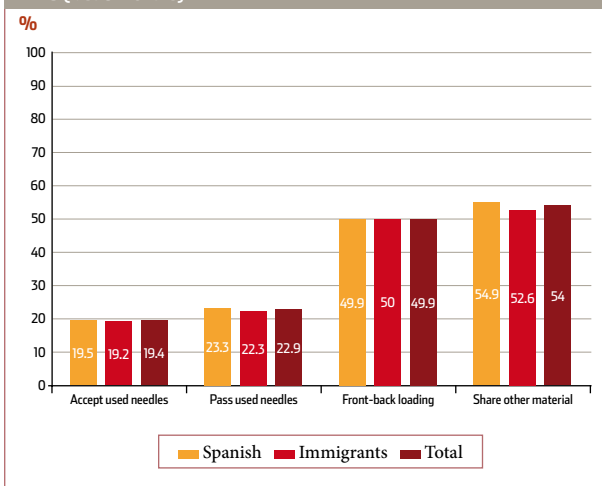
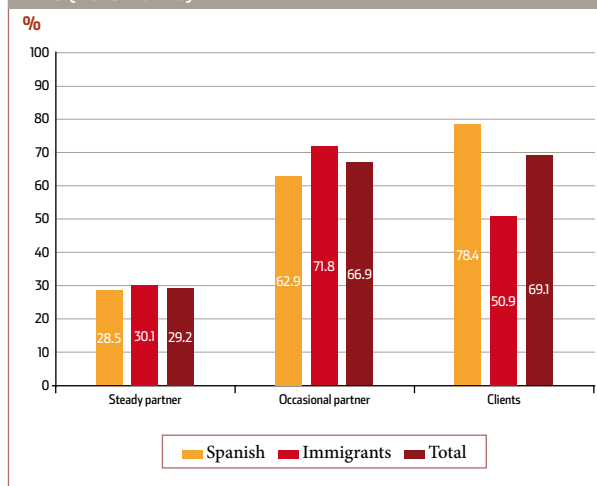


Figure 3.2.2. Prevalence of consistent condom use with steady partners in IDU (last 6 months).



It must be emphasised that amongst the limitations of the study is the lack of being able to generalise about the results of the group of injectors in Catalonia, as the sample was obtained exclusively in harm reduction centres. Also, memory biases and under-reporting of the self-reported risk practices cannot be excluded.

### 3.3. The monitoring of the prevalence of HIV infection and other STI infections and the behaviours associated

#### with their transmission in female sex workers (FSW)

In 2005 behavioural monitoring of FSW was initiated as part of SIVES and in collaboration with the association Àmbit Prevenció. Two transverse studies were carried out in 2005 and 2007 with a convenience sample of 400 women aged over 18 years. The participants were selected by stratifying each autonomous region and country of origin, considering proportional assignation in each stratum. Recruitment was carried out on the street, in flats, clubs and bars all through Catalonia.

The behavioural information was collected via an anonymous structured questionnaire, adapted from the one used by Doctors of the World in the Foundation for the Research and Prevention of AIDS in Spain (FIPSE, according to the Spanish acronym) study carried out in 2002 [13]. The questionnaire was translated into Romanian, Russian and English, and asked about the behaviours of the last 6 months. With previously informed consent, oral fluid and urine samples were anonymously collected in order to determine the prevalence of HIV [11] and the prevalence of *Chlamydia trachomatis* and *N. gonorrhoea*, respectively, through the real-time

Table 3.2.3. HIV HCV *Chlamydia trachomatis* and *Neisseria gonorrhoeae* in biological samples collect in IDU.

	HIV			p	HCV			p	CT			p	NG			p
	Spanish	Immigrants	Total		Spanish	Immigrants	Total		Spanish	Immigrants	Total		Spanish	Immigrants	Total	
Min CI	38.4	17.7	31.1		71.1	69.5	71.7		0.5	1.8	1.3		0.2	0	0.2	
Max IC	47.7	27.1	37.9		79.2	79.3	78		2.9	6.3	3.6		2.3	1.8	1.6	
Prevalence	43	22.4	34.5	<0.0001	75.2	74.4	74.9	0.818	1.4	3.6	2.3	0.049	0.9	0.3	0.7	0.41

PCR technique (Abbott RealTime PCR CT/CG CE).

This section describes the socio-demographic and behavioural characteristics and prevalence of HIV in the women interviewed in 2007, and at the end these are compared with the main indicators collected in the 2005 study.

Of the 400 women interviewed in 2007, 56 were Spanish (14%), 26 were African (19%), 105 were Latin American (26%) and 163 were from Eastern Europe (40.8%). The median age was 29.1 years, the women from Eastern Europe being the youngest (23.8 years). 48.4% of the women had studied to secondary education level or higher, the Spanish and Africans being the groups who reported a lower level of education (33.3% and 27.4% less than grammar school level, respectively). Of the immigrants, the Africans and those from Eastern Europe were those who had been living for less time in Catalonia (30.3% and 28.2% arrived during 2007) ([table 3.3.1](#)). Of the 192 non-European immigrant women, 60.5% were illegal immigrants. The median age of starting work as a SW was 24.2 years and the median time since beginning sex work was 5 years. The women from Eastern Europe were those who started work younger (21.3 years) and who had been working less time (median 2.6 years) ([table 3.3.1](#)).

A quarter of the women had consumed illegal drugs at some time (26.6%) and only 2% had taken them via injection. The Spanish showed a higher level of illegal drug-taking (48.2% at some time) and of injecting drugs (12.5%) ([table 3.3.1](#)).

**Image 3.2.** Female SW are one of vulnerable groups to HIV and other STI infections. Improve targeting education and information about reproductive and sexual health will be important in order to help avoiding those infections in this group.



The majority of the women “always” used condoms during sexual relations with regular and non-regular clients (93.6% and 98.2%, respectively), on the other hand, of the 190 women with a regular partner, only 13.2% had used condoms consistently in sexual intercourse relations without observing differences of country of origin ([figure 3.3.1](#)). Half of the interviewees (50.3%) reported the condom splitting during sexual relations in the last 6 months. Three quarters of the women had been pregnant at some time, the percentage being higher amongst the Spanish (94.6%). The majority of women went for gynaecological check-ups at least once a year, the Africans being those who went least (62.7%) and half of the women reported having had an IA. With regards to the HIV test, 84.8%

of the women reported having taken one, with a higher rate amongst the Spanish women (98.2%) ([table 3.3.1](#)).

The global prevalence of *Chlamydia trachomatis* was 8.8% and of *N. gonorrhoea* 1%, without there being differences according to country of origin. The global prevalence of HIV (2.5%) was higher amongst the Spanish women (8.9%) ([figure 3.3.2](#)). Of the 10 HIV-positive women, only 2 reported knowing their HIV-positive status at the time of the interview. HIV infection was associated with injecting drug use: 40% of the HIV-positive women had injected drugs as opposed to 1% of the HIV-negative women,  $p < 0.05$ .

The main socio-demographic and behavioural characteristics of the wom-

en interviewed in 2007 were similar to those who had been measured before (2005). Of the samples collected, the prevalence of *Chlamydia trachomatis* increased with respect to 2005, above all amongst the African women (2.9% and 10.5%, respectively in 2005 and 2007) (table 3.3.2).

It must be emphasised that amongst the limitations of the study was the impossibility of obtaining a probabilistic sample of FSW and therefore the sample was not representative of the population of FSW in Catalonia. Secondly, the prevalence of some risk behaviours and HIV/STIs could be underestimated. Lastly, the study shows an elevated acceptability of the alternative techniques to detect *Chlamydia trachomatis* and *N. gonorrhoea* in urine samples, due to their being less invasive than conventional techniques and easier to use in healthcare settings, even though they are not the techniques of choice for the diagnosis of these infections.

Table 3.3.1. Sociodemographic, sexual work, drug use and health status characteristics in female SW by country of origin.

	Spanish n=56 %	Latin n=105 %	African n=76 %	Eastern Europe n=163 %	Total n=400 %
<b>Mean age [DE]*</b>	43.4 (10.4)	31.7 (7.8)	26.2 (4.2)	23.8 (4.8)	29.1 (9.4)
<b>Education*</b>					
< Primary	33.3	4.8	27.4	6.8	13.7
Primary	44.4	28.6	35.6	42.9	37.9
Secondary or more	22.3	66.6	37.0	50.3	48.4
<b>Time in Catalonia*</b>					
Arriving on 2007	np	21.0	30.3	28.2	26.5
<b>Mean age at starting SW (DE)*</b>	28.8 (11.4)	26.7 (7.4)	23.6 (3.7)	21.3 (4.6)	24.2 (7.2)
<b>Mean years working as SW (DE)*</b>	14.9 (11.2)	4.9 (5.7)	3.0 (2.5)	2.6 (2.0)	5.0 (6.8)
<b>Illegal drugs use*</b>					
At least once	48.2	32.4	6.7	24.5	26.6
<b>Injection drugs use*</b>					
At least once	12.5	0.9	0	0	2
<b>Pregnant at least once*</b>	94.6	84.8	68.4	68.5	76.5
<b>Yearly gynecology checkups*</b>	89.3	81.9	62.7	80.4	78.7
<b>Induced abortion at least once</b>	56.4	41.9	50.7	52.8	50
<b>HIV testing at least once*</b>	98.2	82.2	80.3	84.8	84.8

\* p<0,05. / np: it's not appropriate.

Figure 3.3.1. Prevalence of consistent condom use by type of partner in female FSW (last 6 months).

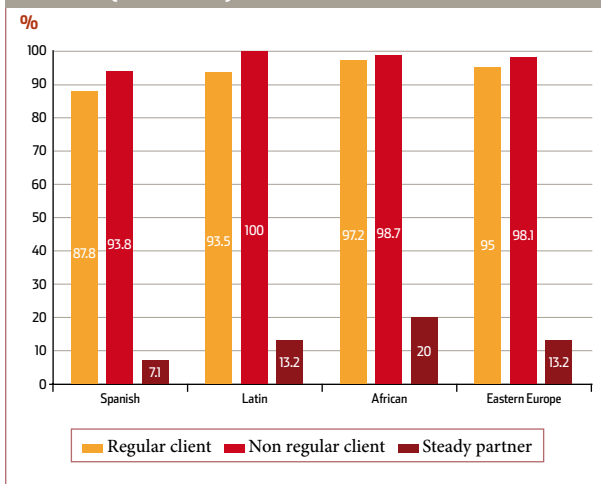
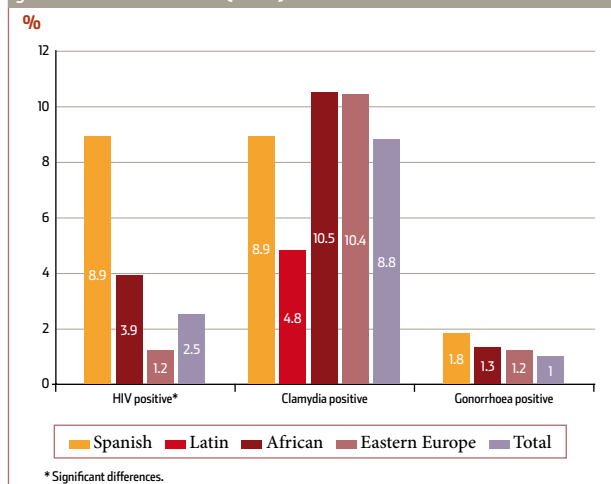


Figure 3.3.2. Prevalence of HIV, *Chlamydia trachomatis* and *Neisseria gonorrhoea* in female FSW (2007).



\* Significant differences.

**Table 3.3.2.** Comparison of main indicators collected in interviews to female FSW in Catalonia and HIV chlamydia and gonorrhoea prevalences by country of origin (2005-2007).

	Spain		Latinamerica		Africa		Eastern Europe	
	2005	2007	2005	2007	2005	2007	2005	2007
<b>Sample size</b>	43	56	123	105	104	76	130	163
<b>Age (mean)</b>	42.1 anys	43.4 anys	32.2 anys	31.7 anys	26.7 anys	26.2 anys	25.1 anys*	23.8 anys*
<b>Time working as SW (years)</b>	15.7 anys	14.9 anys	5.6 anys	4.9 anys	2.9 anys	2.9 anys	2.9 anys	2.6 anys
<b>Drugs use (at least once)</b>	37.2	48.2	31.7	32.4	8.7	6.7	26.2	24.5
<b>Consistent condom use (clients)</b>								
Vaginal sex	83.7	87.5	96.7	95.2	99.0	98.7	95.4	96.7
Anal sex	100.0	84.6	88.5	88.5	66.7	100.0	80.0	68.8
<b>Consistent condom use (partner)</b>								
Vaginal sex	13.3	7.1	10.5	12.7	20.4	19.2	7.8	13.2
Anal sex	14.3	9.1	18.5	21.4	25	0	12.5	23.5
<b>HIV (oral fluid)</b>	9.3	8.9	0	0	2.9	3.9	0	1.2
<b>C. trachomatis (urine)</b>	2.3	8.9	5.7	4.8	2.9*	10.5*	8.5	10.4
<b>N. gonorrhoeae (urine)</b>	0	1.8	0	0	1.9	1.3	0	1.2

\*Significant differences between proportions.

➤ The high prevalence of risk behaviours in MSM interviewed online, especially amongst those over 30 years old, and also in gay meeting places/cruising areas highlights the need to intensify HIV and STI prevention in this group. It is pertinent and necessary to include the Internet in these interventions in Spain.

➤ Within the MSM group there is a certain prevalence of unprotected sexual practices amongst serodiscordant stable couples (26%) and there is a high prevalence amongst seroconcordant positive couples (66.7%), making it necessary to reinforce prevention amongst those people diagnosed with HIV and their sexual partners, not just to

decrease the transmission of HIV but also to avoid reinfection and/or the acquisition of other STIs.

➤ The maintained and in some cases increasing prevalence of the use of drugs before and during sexual relations in MSM, along with the association observed in different studies between the use of drugs and risky sexual behaviours highlights the necessity to intensify interventions to decrease the risk of HIV/STI infection.

➤ The high percentage of HIV-positive MSM who do not know their HIV status confirms the importance of promoting the early diagnosis of HIV in this group.

➤ Although the prevalence of HIV is lower amongst immigrant IDUs, this group is younger and is shown to have less of a social network, factors which can increase its vulnerability in the face of HIV and other STIs.

➤ Prevention messages should not only be centred on the risk practices related to drug injection, but should also include risky sexual practices given the scarce use of condoms reported by the injectors, especially with their regular partners.

➤ The prevalence of *Chlamydia trachomatis* has shown an increase with regards to that measured in

2005 in the group of FSW, making it necessary to strengthen education and information for the prevention of these infections in this group.

➤ There is a low prevalence of the use of condoms amongst FSW and their regular sexual partners; therefore it is necessary to study more profoundly the determining factors and the barriers to the use of condoms according to the type of couple in order to be able to design more effective interventions.

➤ Although the use of injected drugs in the group FSW is in the minority, there is an association between having injected drugs and HIV infection, also making the maintenance of harm reduction programmes especially amongst Spanish women necessary.

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