

# Victorian Primary Care Network for Sentinel Surveillance on BBVs and STIs\*

## Syphilis Network Report 3 July - December 2007

We are pleased to present the third report in this series.

This six monthly report presents information on trends and patterns in syphilis infection in Victoria, with a particular focus on the findings from a sentinel surveillance network established with the collaboration of a number of primary health and sexual health services. Each issue includes standard tabulations from the sentinel surveillance network and features updates from other surveillance systems of relevance to syphilis. The surveillance network provides further insight into trends in annual syphilis diagnoses in Victoria, particularly in men who have sex with men (MSM) and information about syphilis testing and prevalence among those tested complementing other data sources. In this report, a revised method was used for assigning HIV status in individuals tested for syphilis, which led to an increased number of individuals with a known HIV status in the syphilis network.

### Sentinel Surveillance for Syphilis

**Method:** In 2006 a syphilis sentinel surveillance network commenced operation in Victoria. Five clinics (listed on page 2) participate in the system (sexual health clinics=2, gay men's health clinics=3); all have a high case load of MSM and diagnose a high number of infectious syphilis cases per year. The system involves [linking](#) two data sets:

- (i) [Demographic and syphilis testing data](#) on individuals routinely tested for syphilis from the clinics pathology provider. Syphilis testing refers to any laboratory investigations undertaken to determine syphilis infection. Results presented as positive tests refer to infectious syphilis.
- (ii) [Demographic and behavioural](#) information collected using a sentinel surveillance form. In patients tested for syphilis concurrently with a HIV test, a HIV/STI form is completed. Doctors complete the section which serves as a HIV request form, in all individuals tested (demographics, testing history and risk group) and MSM patients voluntarily complete the section on risk behaviour. For patients tested for syphilis without a HIV test (including HIV positive patients) an STI specific form is completed.

HIV status of individuals tested for syphilis was assigned using prior HIV viral load or T-cell assay test (indicating HIV positive status); results of prior HIV tests within the sentinel surveillance system; and self report of previous HIV test result. Two sites did not use the sentinel surveillance form; one had a computer-assisted medical records system which collected briefer behavioural information, the other allowed access to laboratory syphilis testing data only. This report provides syphilis sentinel surveillance results for the period July to December 2007 and focuses on **tests in all males** and **tests and surveys in MSM**

**Results - Tests in males:** Between July and December 2007, a total of 7231 syphilis tests were conducted in

individuals attending the five sites; 5380 (74%) among males (Table 1). A monthly mean of 896 tests (range: 726-1005) were conducted among males, similar to the monthly average of 895 tests reported previously (Jan-Jun 07) and an increase from the 794 in the first report (Apr-Dec 06). Of the 4464 tests conducted at sexual health clinics, 61% were in males compared to gay men's health clinics where 2767 tests were undertaken and 95% were in males. In males tested, the overall infectious syphilis prevalence was **1.9% (95% CI 1.6-2.3)** and was highest among those aged 40-49 years. HIV status was known for 87% of males tested for syphilis between July to December 2007. Infectious syphilis prevalence was higher in HIV positive males than in HIV negative males and was highest in the 13% of males tested for whom HIV status was unknown (Table 1).

**Table 1: Age and HIV status of males tested for syphilis, Jul-Dec 2007**

		All tests		Males tested		Males positive	
		n	%	n	%	n	%
		7231		5380		103	1.9 (1.6-2.3)
Clinic type	Sexual Health	4464		2739		44	1.6
	Gay Men's Health	2767		2641		59	2.2
Age group (years)	16-19			78	1.5	0	0.0
	20-29			1501	27.9	18	1.2
	30-39			1723	32.0	37	2.2
	40-49			1374	25.5	40	2.9
	50+			703	13.1	8	1.1
HIV status	Negative			3448	64.1	44	1.3
	Positive			1209	22.5	26	2.2
	Unknown			723	13.4	33	4.6

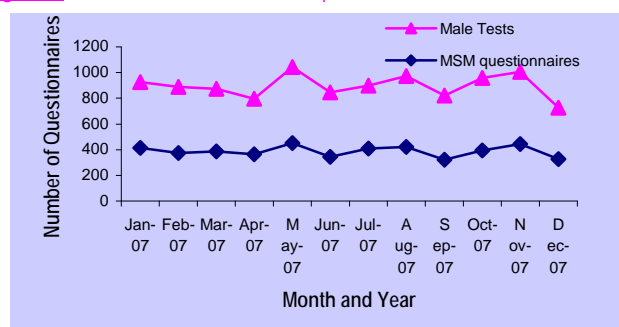
**Results – MSM:** The following results refer to MSM surveyed and tested, excluding sex workers. Of the 5380 males tested, a total of 2251 questionnaires were completed in MSM (Table 2); with a mean of 375 questionnaires (range: 312-432) completed each month (Figure 1) compared with 382 per month in the previous reporting period (Jan-Jun 07).

**Table 2: Syphilis tests, questionnaires and result in males, Jul-Dec 2007**

Clinic type	Sexual Health		Gay Men's Health			All
	6*	18*	10	5	4-	
Site number	6*	18*	10	5	4-	All
<b>Tests in males</b>						
Syphilis tests (n)	17	2722	1777	601	263	5380
Questionnaires (n)	13	2477	818	207	NA-	3515
Response rate (%)**	76.5	91.0	46.0	34.4	NA-	65.3
<b>MSM (excluding sex workers)</b>						
Questionnaires (n)	5	1317	734	195	NA-	2251
Positive tests <sup>‡</sup> (n)	0	32	19	2	NA-	53
Positive tests <sup>‡</sup> (%)***	0	2.4	2.6	1.0		2.4 (1.8-3.1)

\*Site 18 and 6 completed surveys on MSM as part of routine sexual history when it was the patient's first visit within a 3 month period. -Site 4 provided testing data only. \*\*Response rate = total surveys completed in males / total number of males tested for syphilis x 100; \*\*\*Positive tests (%) = number of positive tests in MSM completing a survey / number of survey forms completed in MSM x 100

**Figure 1: Number of tests in males and questionnaires in MSM, Jan-Dec 2007**



\*In regards to sentinel surveillance, BBVs (blood borne viruses) refers to hepatitis C and STIs (sexually transmissible infections) refers to HIV, chlamydia and syphilis

Among MSM, a third (33%) were aged 30-39 years; 14% were known to be HIV positive and 15% reported STI symptoms at the time of syphilis testing (Table 3). Of MSM with casual anal sex partners, 34% reported not always using condoms in the past six months (Table 4).

The overall infectious syphilis prevalence among MSM surveyed and tested was **2.4% (95% CI 1.8–3.1)** (Table 2). The highest syphilis prevalence was observed in those (i) aged 40-49 years (ii) reporting STI symptoms and (iii) known to be HIV positive. Of 53 MSM diagnosed with infectious syphilis, 68% (n=36) were aged 30-49 years and 21% (n=11) were coinfecting with HIV (Table 3).

**Table 3: Characteristics of MSM surveyed and tested for syphilis, all sites (sex workers, unknowns excluded), Jul-Dec 2007**

		Tested		Positive	
		n	%	n	%
All individuals		2265	100	53	2.4
Age group (years)	16-19	51	2.3	0	0
	20-29	728	32.4	14	1.9
	30-39	749	33.3	19	2.5
	40-49	482	21.4	17	3.5
	50+	240	10.7	3	1.3
Country of birth	Australia	1553	72.9	36	2.3
	Other	577	27.1	7	1.2
Aboriginal and/or Torres Strait Islander	No	2045	99.1	43	2.1
	Yes	19	0.9	1	5.3
STI symptoms	No	1608	85.3	25	1.6
	Yes	277	14.7	16	5.8
HIV status	Negative	1947	86.5	42	2.2
	Positive	304	13.5	11	3.6

**Table 4: Characteristics of MSM surveyed and tested for syphilis, excluding site 18\* (sex workers, unknowns excluded), Jul-Dec 2007**

		Tested		Positive	
		n	%	n	%
All individuals		934	100	21	2.2
Male oral sex partners last six months	None	28	3.1	1	3.6
	1-5	495	54.9	8	1.6
	6+	379	42.0	12	3.2
Male anal sex partners, last six months	None	99	11.0	2	2.0
	1-5	583	64.6	10	1.7
	6+	220	24.4	9	4.1
Regular anal sex partners, last six months	No	324	37.1	6	1.9
	Yes	550	62.9	15	2.7
HIV status of current regular partner	Positive	62	13.0	1	1.6
	Negative	328	68.9	9	2.7
	Don't know/he hasn't had a test	86	18.1	3	3.5
Condom use when having anal sex with regular partner/s, last six months	Did not always use condoms	312	56.7	10	3.2
	Always used condoms	238	43.3	5	2.1
Casual anal sex partners, last six months	No	238	26.6	3	1.3
	Yes	657	73.4	18	2.7
Condom use when having anal sex with casual partner/s, last six months	Did not always use condoms	223	33.9	8	3.6
	Always used condoms	434	66.1	10	2.3

\* Site 18 uses electronic data collection which collects briefer behavioural information than the sentinel surveillance form

**Conclusion:** There was little difference in the infectious syphilis prevalence of 2.4% among MSM tested and surveyed between July and December 2007 compared with the estimate of 2.7% in the previous report (Jan-Jun 07) but was higher than the prevalence of 1.6% reported in 2006 (Apr-Dec 06). These findings are consistent with trends in passive surveillance (Figure 2). In both the testing data (males) and the survey data (MSM), infectious syphilis prevalence was higher in HIV positive individuals

compared with HIV negative individuals highlighting the need for targeted prevention to all MSM.

**Limitations:** (i) The STI questionnaire designed for completion by MSM when tested for syphilis without a concurrent HIV test was infrequently completed limiting the available behavioural data in HIV positive MSM, (ii) the sentinel system only includes MSM seeking health services and the results cannot be assumed to apply to all MSM, (iii) all HIV positive men from site 18 were assumed to be MSM as no further behavioural information was available, and (iv) STI symptoms are not a specific option on the questionnaire used in 2007 at gay men's health services, so the frequency of symptoms in MSM may be underreported. This option will be included from 2008.

*Sites:* Melbourne Sexual Health Centre, Prahran Market Clinic, The Centre Clinic, Carlton Clinic, Geelong Sexual Health Clinic

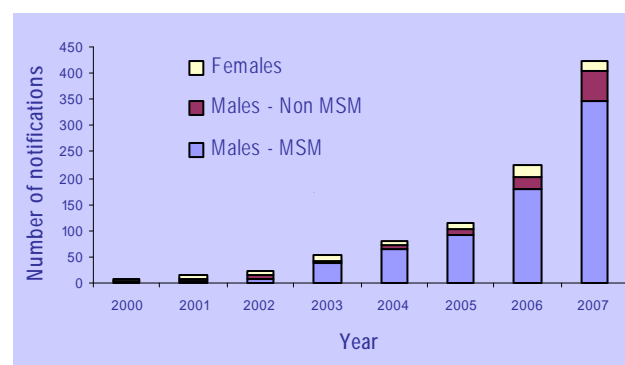
*Collaborators:* Burnet Institute, Victorian Infectious Diseases Reference Laboratory, Melbourne Sexual Health Centre, Department of Human Services (Funders)

## Updates from Other Surveillance Systems

### Passive surveillance

Between 2000 and 2007, annual infectious syphilis notifications in Victoria increased from 9 to 423. The annual breakdown between 2000 and 2007 is shown in Figure 1. Annually, the majority of notifications were consistently among MSM (82% in 2007).

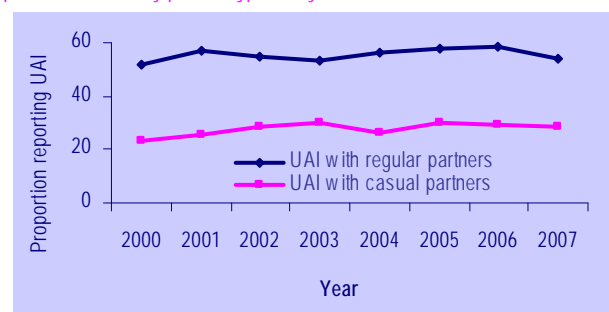
**Figure 2: Infectious syphilis notifications by sexual orientation (unknowns excluded), Victoria, 2000-2007**



### Periodic Survey

Sexual risk behaviour among MSM is monitored through the annual Melbourne Periodic Gay Community Survey. The 2007 survey found that among MSM reporting casual sexual partners, there was an increase in unprotected anal intercourse (UAI) from 24% in 2000 to 29% in 2007 (Figure 3).

**Figure 3: Frequency of reported unprotected anal intercourse (UAI) in the past six months, by partner type and year, Victoria, 2000-2007**



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