

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

Syphilis Network Report 2 January - June 2007

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

This six monthly report presents information on trends and patterns in syphilis 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, as new information comes to hand. 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.

Sentinel Surveillance for Syphilis

Method: Since March 2006 a sentinel surveillance system has been operational 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 pathology provider's of the clinics. Syphilis tests refers to all laboratory investigations undertaken to determine syphilis infection i.e. RPR, TPHA or ELISA
- (ii) Demographic and behavioural information collected using a sentinel surveillance form. In patients tested for syphilis with a HIV test, a HIV/STI form is completed. Doctors' complete the top part, which serves as a HIV request form, in all individuals tested (demographics, testing history and risk group) and MSM patients' voluntarily complete the bottom part (risk behaviour information). For patients tested for syphilis without a HIV test (including HIV positive patients) an STI specific form is completed. HIV status in MSM tested for syphilis was determined using responses to the question 'result of last HIV test'.

Two sites did not use the form; one had a computer-assisted medical records system which collected briefer behavioural information, the other allowed access to laboratory syphilis testing data. This report provides syphilis sentinel surveillance results for the period January 2007 to June 2007 and focuses on results in MSM.

Results - Tests: Between January and June 2007, a total of 7232 syphilis tests were conducted in individuals attending the five sites; 5372 (74%) among males (Table 1). A monthly mean of 895 tests (range: 795-1042) were conducted among males, which is higher than the monthly average of 794 tests reported previously (Apr-Dec 06). At sexual health clinics, 4499 tests were conducted and close to two thirds were in males (62%), compared to gay men's health clinics where 2733 tests were undertaken and the majority were in males (95%) (Table 1).

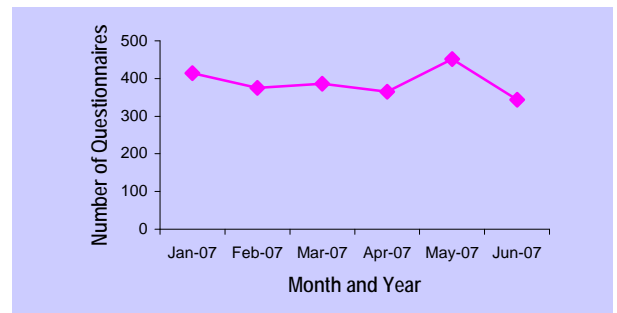
Table 1: Syphilis tests and questionnaires, by sex and result, Jan-Jun 2007

Clinic type	Sexual Health		Gay Men's Health			All
	6*	18*	10	5	4+	
Site number	6*	18*	10	5	4+	All
All tests						
Syphilis tests (n)	47	4452	1690	741	302	7232
Tests in males						
Syphilis tests (n)	23	2750	1606	720	273	5372
Syphilis tests (%)	48.9	61.8	95.0	97.2	90.4	74.3
Positive tests [‡] (n)	1	68	40	10	3	119
Positive tests [‡] (%)	4.4	2.5	2.5	1.4	1.1	2.3 (1.9-2.7)
Questionnaires (n)	15	2492	740	268	NA+	3515
Response rate (%)**	65.2	90.6	46.1	37.2	NA+	65.4
MSM						
Questionnaires (n)	11	1416	647	261	NA+	2335
Positive tests [‡] (n)	1	49	8	3	NA+	61
Positive tests [‡] (%)***	9.1	3.5	1.2	1.2	0	2.6 (2.0-3.3)

Positive tests = Infectious syphilis. *Site 18 and 6 completed surveys on MSM as part of routine sexual history when it was the patients 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

Results – MSM: The following results refer to MSM surveyed and tested. A total of 2335 questionnaires were completed in MSM (Table 1); with a mean of 389 questionnaires (range: 344-452) completed each month (Figure 1) compared with 318 per month (range: 280-338) in the previous report (Apr-Dec 06). Sex workers were excluded from further analysis and are not represented in the remaining results.

Figure 1: Monthly number of questionnaires in MSM, Jan-Jun 2007



Among MSM, a third (33%) were aged 30-39 years; 17% were known to be HIV positive and 17% reported STI symptoms at the time of syphilis testing (Table 2). Nearly all MSM (98%) reported having oral sex partners in the previous six months and 75% reported anal intercourse with casual partners in the last six months. Of MSM with casual anal sex partners, 36% reported not always using condoms in the past six months (Table 3).

The overall infectious syphilis prevalence among MSM surveyed and tested was **2.7% (95% CI 2.0–3.3)** (Table 2). The highest syphilis prevalence was observed in those (i) aged over 40 years (ii) reporting STI symptoms and (iii) known to be HIV positive.

Table 2 shows that in the 61 MSM diagnosed with infectious syphilis, 60% (n=36) were aged between 30 and 49 years and 46% (n=28) were coinfecting with HIV. Table 3 shows that of the 12 MSM diagnosed with infectious syphilis where a questionnaire was completed, all reported oral and anal sex partners in the past six months, 75% (n=9) reported having regular and casual anal sex partners in the last six months and of those with casual anal sex partners 22% (n=2) did not always use condoms with such partners (compared to 36% overall).

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

Table 2: Characteristics of MSM surveyed and tested for syphilis, all sites (sex workers, unknowns excluded), Jan-Jun 2007

		Tested		Positive	
		n	%	n	%
All individuals		2295		61	2.7
Age group (years)	16-19	49	2.1	1	2.0
	20-29	719	31.3	14	2.0
	30-39	753	32.8	18	2.4
	40-49	506	22.1	18	3.6
	50+	268	11.7	10	3.7
Country of birth	Australia	1415	74.6	27	1.9
	Other	483	25.4	10	2.0
Aboriginal and/or Torres Strait Islander	No	2112	98.9	50	2.4
	Yes	23	1.1	0	0
STI symptoms	No	1621	83.0	27	1.7
	Yes	332	17.0	15	4.5
HIV positive	No	832	36.3	9	1.1
	Yes	396	17.3	28	7.1
	Not available	1067	46.5	24	2.3

Table 3: Characteristics of MSM surveyed and tested for syphilis, excluding site 18* (sex workers, unknowns excluded), Jan-Jun 2007

		Tested		Positive	
		n	%	n	%
All individuals		906		12	1.3
Male oral sex partners last six months	None	20	2.3	0	0.0
	1-5	464	52.5	6	1.3
	6+	400	45.3	6	1.5
Male anal sex partners, last six months	None	93	10.5	0	0.0
	1-5	558	63.1	8	1.4
	6+	234	26.4	4	1.7
Regular anal sex partners, last six months	No	327	37.8	3	0.9
	Yes	539	62.2	9	1.7
HIV status of current regular partner	Positive	56	11.4	1	1.8
	Negative	336	68.6	5	1.5
	Don't know/he hasn't had a test	98	20.0	2	2.0
Condom use when having anal sex with regular partner/s, last six months	Did not always use condoms	298	55.3	5	1.7
	Always used condoms	241	44.7	4	1.7
Casual anal sex partners, last six months	No	219	24.9	3	1.4
	Yes	659	75.1	9	1.4
Condom use when having anal sex with casual partner/s, last six months	Did not always use condoms	238	36.1	2	0.8
	Always used condoms	421	63.9	7	1.7

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

Conclusion: The infectious syphilis prevalence of 2.7% among MSM tested and surveyed between January and June 2007 was higher than the estimate of 1.6% in the previous report (Apr-Dec 06). These findings seem consistent with passive trends (Figure 2). Of the 61 infectious syphilis diagnoses in this group, 46% were among MSM coinfecting with HIV, which is possibly an underestimation because HIV status was unknown for nearly 40% of cases. In addition to more diagnoses, more syphilis testing of MSM occurred at the five clinics in the first six months of 2007 compared to the monthly number of tests between Apr-Dec 2006, which could reflect better health seeking or additional testing being conducted among clients attending these clinics.

Limitations: (i) The STI questionnaire designed for completion by MSM when tested for syphilis without a concurrent HIV test was infrequently completed at the gay men's health clinics, suggesting that syphilis epidemiology in HIV positive men at these clinics is not being captured

adequately, (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 (n=385) were assumed to be MSM as no further behavioural information was available, and (iv) STI symptoms are not a specific option on the questionnaire at two gay men's health services, so the frequency of symptoms in MSM may be underreported.

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

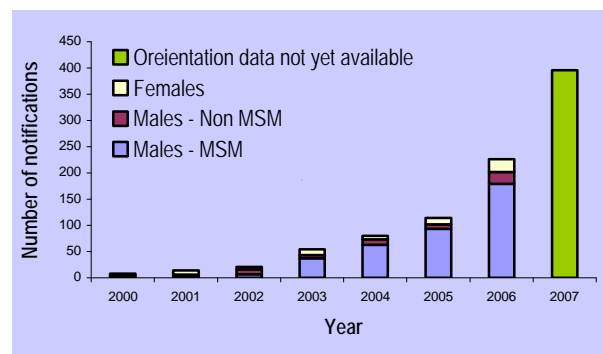
Collaborators: Burnet Institute, Victorian Infectious Diseases Reference Laboratory, Melbourne Sexual Health Centre, Department of Human Services (Funders)

Updates from Other Surveillance Systems

Passive surveillance

Between 2000 and 2007, annual infectious syphilis notifications in Victoria increased from 9 to 396. The annual breakdown between 2000 and 2007 is shown in Figure 1. Annually, the majority of notifications were consistently among MSM (85% in 2006).

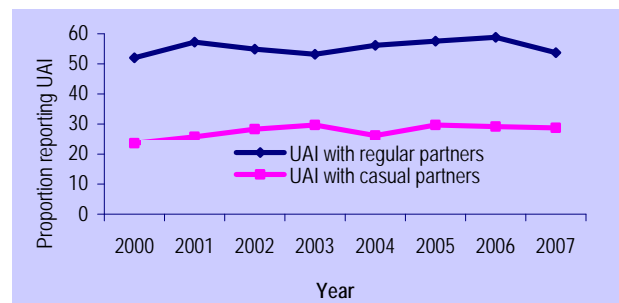
Figure 2: Infectious syphilis notifications by sexual orientation (unknowns excluded), Victoria, 2000-2007



Periodic Survey

Sexual risk behaviour among MSM is monitored through the annual Melbourne Periodic Gay Community Survey. The most recent survey conducted in February 2007 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). Also in the same survey, 34.3% of respondents reported an anal swab in the past 12 months and 44.3% reported a urine test in the past 12 months, a significant increase from previous years.

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



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