

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

## Hepatitis C 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 hepatitis C in Victoria, with a particular focus on the findings from a sentinel surveillance network established with the collaboration of a number of primary health care services, detention facilities and sexual health clinics. Each issue includes standard tabulations from the sentinel surveillance network and features updates from other surveillance systems of relevance to hepatitis C, as new information comes to hand. The surveillance network provides further insight into trends in annual hepatitis C diagnoses in Victoria and information about hepatitis C testing and prevalence among those tested, complementing other data sources.

### Sentinel Surveillance for Hepatitis C

**Method:** In March 2006, a sentinel surveillance system based on primary care, detention and sexual health clinics commenced operation involving collection and linking of two data sets (i) demographic data and hepatitis C test results collected by the laboratory on all individuals routinely tested for hepatitis C at the site, and (ii) extra demographic information and risk behaviour information collected through brief questionnaires completed voluntarily by patients (not known to be hepatitis C positive) while in the clinic. Sentinel sites were chosen if (i) they diagnosed a high number of hepatitis C infections per year, (ii) had a high case load of injecting drug users (IDU) and (iii) were willing to participate. In April 2007, a new clinic joined the network, bringing the number of sites to nine. Two sites did not use the form; one already had a computer-assisted medical records system which collected briefer patient information, the other provided testing data only. This report provides hepatitis C sentinel surveillance results for the period January to June 2007. Only the HCV antibody test (not HCV RNA) was used for interpretation of HCV positive status.

**Results - Tests and prevalence:** Between January and June 2007, 840 hepatitis C virus (HCV) antibody tests were conducted in individuals attending the nine sites; 580 (69%) in males and 259 (31%) in females and one person of unknown gender. On average, 100 males were tested for HCV antibodies per month compared to 45 females (Figure 1).

**Table 1:** Number of HCV antibody tests and questionnaires, by HCV result (Jan-Jun 2007)

Site Number:	Sexual Health Clinics			Primary Health Care Services					Detention Facilities				All Sites
	18 <sup>#</sup>	6 <sup>#</sup>	Total	1	8	12 <sup>#</sup>	17	Total	7	11	9	Total	
<b>HCV tests</b>													
Number of tests	463	38	501	37	47	25	21	130	40	160	9	209	840
Positive tests (n)	37	1	38	12	11	17	1	41	2	50	2	54	133
Positive tests (%)	8.0	2.6	7.6	32.4	23.4	68.0	4.8	31.5	5.0	31.3	22.2	25.8	15.8
<b>Questionnaires</b>													
Number	363 <sup>#</sup>	16 <sup>#</sup>	379	11	0	-	6	17	21	19	6	46	442
Response rate (%) <sup>*</sup>	78.4	42.1	75.6	29.7	0	-	28.6	13.1	52.5	11.9	66.7	22.0	52.6
Positive tests (n)	25	0	25	1	0	-	1	2	2	5	1	8	35
Positive tests (%) <sup>**</sup>	6.9	--	6.6	9.1	0	-	16.7	11.8	9.5	26.3	16.7	17.4	7.9

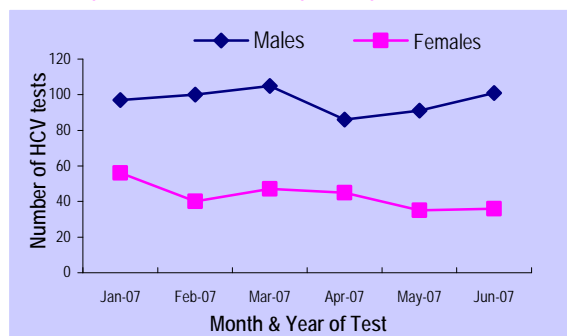
<sup>\*</sup> Response rate = total surveys completed / total number of HCV antibody tests x 100 <sup>\*\*</sup> Positive tests (%) = total positive tests in individuals completing a questionnaire / total questionnaires x 100  
<sup>#</sup> Questionnaires at site 18 and site 6 were administered as part of routine history taking, if a patient had two or more tests in a 3 month period, behavioural information was only collected on the first occasion, resulting in more tests than surveys <sup>#</sup> Site 12 agreed to provide laboratory testing data only, questionnaires were not used at this site

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

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Hepatitis C sentinel surveillance report, January to June 2007, Page 1 of 2

**Figure 1:** Monthly number of HCV antibody tests by sex, all clinics, Jan-Jun 2007



The mean monthly number of antibody tests conducted was 140 (range: 126-153), which was similar to the monthly mean of 144 tests reported previously (Apr-Dec 06).

Of the individual's tested, the overall HCV prevalence was 15.8% but varied by site type; 7.6% (95% CI 5.4-10.2) at sexual health clinics, 25.8% (95% CI 20.0-32.3) at detention facilities and 31.5% (95% CI 23.7-40.3) at primary healthcare services (Table 1). Hepatitis C prevalence was higher in males (18%) compared to females (12%) and those aged 35 years and over (19%) compared to other age groups (Table 2).

**Results - demographics, behaviour and prevalence:** Both demographic and behavioural information were available for 442 (53%) of the 840 individuals tested for hepatitis C and not known to be already positive; with response rate ranging from 0% to 78% per site (Table 1). Most information arose from site 18 which used a computer-assisted medical records system. Among these 442 individuals; 61% were male, 32% were aged over 35 years, 75% were born in Australia and 41% reported ever injecting a drug (40% at sexual health centres, compared to 47% for all other sites) (Table 3). Overall HCV prevalence was 8.0% (95% CI 5.6-10.9) and was similar in males and females (Table 3). HCV prevalence among those reporting injecting drug use within the past 12 months was 23%, compared to 10% among those who last injected over 12 months ago and 1% among those who had never injected drugs.

**Results - additional behavioural information:** At sites using the sentinel surveillance form, additional behavioural information was available; one third (33%) of 76 reported they had previously been tested for HCV and 7% reported symptoms of acute HCV. Twelve (43%) of 28 respondents reported ever having shared needles or syringes (Table 4).

**Table 2: Demographics among individuals tested for HCV antibodies, all clinics (unknowns excluded), Jan-Jun 2007**

Site Number:	Sexual Health Clinics				Primary Health Care Services								Detention Facilities						All		
	18		6		1		8		12		17		7		11		9				
	t	pos (%)	t	pos (%)	t	pos (%)	t	pos (%)	t	pos (%)	t	pos (%)	t	pos (%)	t	pos (%)	t	pos (%)	t	pos (%)	
<b>All</b>	463	37 (8.0)	38	1 (2.6)	37	12 (32.4)	47	11 (23.4)	25	17 (68.0)	21	1 (4.8)	40	2 (5.0)	160	50 (31.3)	9	2 (22.2)	840	133 (15.8)	
Age (yrs)	16-19	19	1 (5.3)	4	0 (0.0)	5	0 (0.0)	0	-	3	1 (33.3)	3	0 (0.0)	40	2 (5.0)	11	2 (18.2)	6	2 (33.3)	91	8 (8.8)
	20-24	78	5 (6.4)	7	0 (0.0)	3	1 (33.3)	7	1 (14.3)	8	5 (62.5)	4	0 (0.0)	0	-	31	8 (25.8)	3	0 (0.0)	141	20 (14.2)
	25-29	96	5 (5.2)	4	1 (25.0)	3	1 (33.3)	9	2 (22.2)	3	3 (100.0)	3	0 (0.0)	0	-	28	8 (28.6)	0	-	146	20 (13.7)
	30-34	84	2 (2.4)	4	0 (0.0)	6	2 (33.3)	12	3 (25.0)	5	5 (100.0)	2	0 (0.0)	0	-	25	12 (48.0)	0	-	138	24 (17.4)
	35+	186	24 (12.9)	19	0 (0.0)	20	8 (40.0)	19	5 (26.3)	6	6 (100.0)	9	1 (11.1)	0	-	65	20 (30.1)	0	-	324	61 (18.8)
Sex	Male	295	24 (8.1)	17	0 (0.0)	17	7 (41.2)	29	8 (27.6)	16	11 (68.8)	8	1 (12.5)	39	1 (2.6)	159	50 (31.5)	0	-	580	102 (17.6)
	Female	168	13 (7.7)	20	1 (5.0)	20	5 (25.0)	18	3 (16.7)	9	6 (66.7)	13	0 (0.0)	1	1 (100)	1	0 (0.0)	9	2 (22.2)	259	31 (12.0)

t=number of tests, pos=number of tests positive for HCV antibodies

**Table 3: Characteristics and HCV prevalence among individuals surveyed and tested, all clinics (unknowns excluded), Jan-Jun 2007**

		Tested		Positive	
		n	%	n	%
<b>All</b>		439	100	35	8.0 (5.6-10.9)
Age group (years)	16-19	47	10.7	4	8.5
	20-24	83	18.9	8	9.6
	25-29	92	21.0	5	5.4
	30-34	77	17.5	3	3.9
	35+	140	31.9	15	10.7
Sex	Male	265	60.5	21	7.9
	Female	173	39.5	14	8.1
Country of Birth	Australia	301	74.7	26	8.6
	Other	102	25.3	7	6.9
Aboriginal and/or Torres Strait Islander	No	384	97.2	29	7.6
	Yes	11	2.8	1	9.1
Symptomatic	No	324	99.4	26	8.0
	Yes	2	0.6	0	0.0
IDU history	Never	242	59.3	2	0.8
	<= 12 months ago	95	23.3	22	23.2
	> 12 months ago	71	17.4	7	9.9

**Table 4: Characteristics of individuals surveyed and tested, excluding site 18, Jan-Jun 2007**

		Tested		Positive	
		n	%	n	%
<b>All</b>		76		10	13.2
History of a previous HCV test	No	47	61.8	8	17.0
	Yes	25	32.9	2	8.0
	Don't Know	4	5.3	0	0.0
Acute HCV symptoms	No	50	65.8	9	18.0
	Yes	5	6.6	1	20.0
	Don't Know	21	27.6	0	0.0
Ever shared needle/syringe (n=28)	No	16	57.1	5	31.3
	Yes	12	42.9	5	41.7

**Conclusion:** The HCV prevalence in the 840 persons tested at primary health services was 32% which is lower than the estimate of 47% in the previous report (Apr-Dec 06). However, results from this report are not directly comparable to those from the Apr-Dec 06 report because the case definition of a positive HCV antibody test was updated (see limitation iii). In the 442 persons where both demographic and behavioural information were available (and not known to be previously positive), HCV prevalence was 8.0% in all individuals and 23% among current and recent IDUs.

**Limitations:** (i) there was a low questionnaire response rate at most sites and the majority of behavioural information arose from site 18 where HCV antibody testing is regularly undertaken with STI testing and the proportion of individuals reporting a history of injecting drug use is lower than other sites, ii) the results describe HCV prevalence in persons tested rather than in IDUs, hence these estimates are not generalisable to all IDUs, and iii) in this report presence of hepatitis C infection is determined by a positive HCV antibody test (without consideration of RNA) and some positive antibody tests may represent cleared infections. This differs to the previous method (Apr-Dec 06) of assigning positive results that incorporated RNA test results (if available). Consequently, results from this report are not directly comparable with the previous report (Apr-Dec 06).

*Sites: Access Health, Geelong City Medical Centre, Geelong Sexual Health Clinic, Healthworks, Melbourne Juvenile Justice Centre, Melbourne Sexual Health Centre, North Yarra Community Health, Port Phillip Prison, Parkville Youth Residential Centre*

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

## Updates from Other Surveillance Systems

### Passive Surveillance

Passive HCV surveillance in Victoria has shown that the number of HCV infections reported annually remained steady with 2555 in 2006 and 2571 in 2007. Results from enhanced surveillance show that over 80% of newly acquired cases are among IDUs.

### Australian Needle and Syringe Program Survey

This annual national survey monitors risk behaviours and prevalence of HIV and HCV in IDUs attending needle and syringe programs. The 2002-2006 report shows a slow but steadily increasing prevalence of HCV among IDUs, from 56% in 2002 to 62% in 2006. However the HCV prevalence among those injecting for three years or less has decreased, from 38% in 2002 to 18% in 2006 and amongst IDUs aged less than 20 years from 38% in 2002 to 17% in 2006.

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