

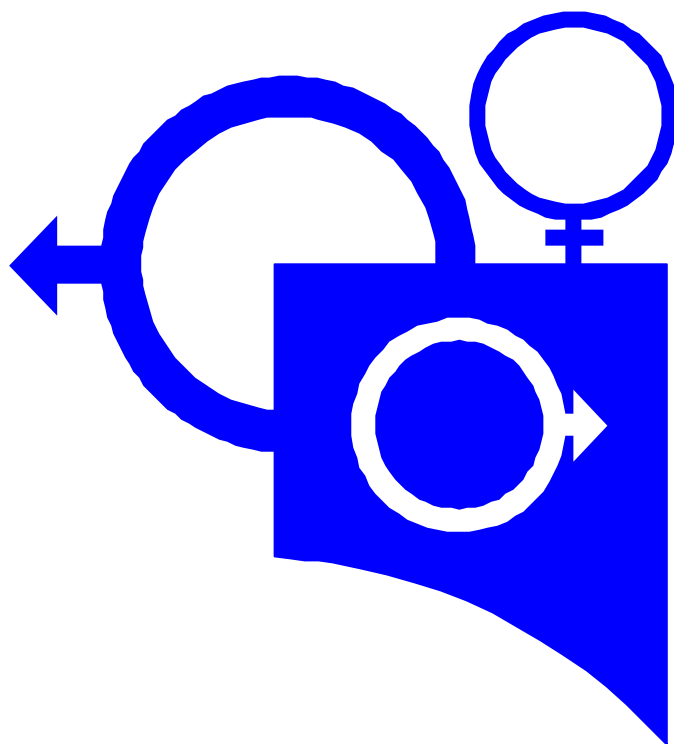
# Sexually Transmitted Diseases Services Quarterly Surveillance Report

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At STD Services, education and contact tracing are the two major control measures used to reduce the spread of sexually transmitted infections. This audit looks at the timing of follow-up, including treatment and contact tracing, among those of the clinic clientele diagnosed with genital chlamydial infection.

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## **Follow-up of clients with chlamydia at Clinic 275 in 2001.**

### **Introduction**

Control of sexually transmitted infections (STIs) has long been a major issue. In the last 20 years there has been a reduction in the prevalence of many bacterial STIs in Australia<sup>1</sup> and most other developed countries<sup>2</sup>. This is believed to be in part due to more effective control; in Sweden the rate of many STIs has decreased by 40-50% since the introduction of intervention programs<sup>3</sup>. The aims of control include the interruption of transmission and prevention of complications and sequelae<sup>2</sup>. Effective control depends on a number of factors including health promotion, education, adequate facilities and ongoing research<sup>1</sup>. The success that has occurred in the last 20 years is partly due to behaviour change, development of reliable diagnostic tests, effective antibiotic therapy and contact tracing<sup>2</sup>.

Chlamydia is an important sexually transmitted infection, the prevalence is believed to be approximately 1 in 20, rising to 1 in 5 for those attending sexual health clinics<sup>4</sup>. It is the most common bacterial STI in most developed nations<sup>5,6</sup>. The classical presentation of chlamydia in males is urethritis, but it can sometimes cause epididymitis and proctitis (in men who have sex with men)<sup>4</sup>. In females the endocervix is the primary site of infection; symptoms include pelvic pain, dyspareunia, vaginal discharge, vulval irritation and dysuria<sup>4</sup>. Chlamydial infection is frequently asymptomatic, with some studies showing that up to 67% of infections are asymptomatic<sup>4</sup>. Chlamydial infection can have serious sequelae; it is a major cause of pelvic inflammatory disease (PID). Untreated PID can cause tubal damage, leading to infertility, ectopic pregnancy and chronic pelvic pain. Risk factors for chlamydial infection are young age, ethnic minority and multiple sexual partners. Since chlamydia is most common in younger age groups it can place their entire reproductive future at risk<sup>7</sup>. The ability of chlamydia to cause asymptomatic, chronic infection allows core groups to perpetuate infection<sup>4</sup>.

To control chlamydia effectively, infected individuals and their partners need to be identified and treated. The importance of contact tracing is highlighted in studies showing that over 50% of partners of those with chlamydia are infected, even if asymptomatic<sup>3,4</sup>. These infected partners can either reinfect the individual or may infect other sexual partners. Chlamydia tests are included in the general screen offered to clients attending Clinic 275, and all clients with chlamydia are followed up for treatment and contact tracing. Contact tracing at the clinic is undertaken by professionally trained nursing staff. Face-to-face interviews are preferred, if this is difficult to arrange, a contact tracing interview is conducted by telephone.

The testing procedure at Clinic 275 depends on the presentation and gender of the client<sup>8</sup>. Asymptomatic male clients provide first void urine for chlamydia PCR testing, whereas males complaining of symptoms, or partners identified by contact tracing, have a urethral swab sent for PCR testing. An endocervical swab for chlamydia PCR is collected from females. Clients are asked to return the following week for their results and are encouraged to provide contact details. If an investigation returns a positive result, the client is informed of the need for treatment at the return visit and, if necessary, contact traced. The standard treatment for chlamydia is 1g of azithromycin. All males with non-gonococcal urethritis confirmed by microscopy and contacts, male or female, are treated at first presentation. Asymptomatic males and the majority of females are treated at the second visit, usually when they return for results.

The aim of the audit was to measure the success of follow-up of clients diagnosed with genital chlamydia at Clinic 275. Three measures were used to determine the success of follow-up. The time taken to inform the client of a positive chlamydia result, the time to treatment and the time to contact tracing. Medical records at Clinic 275 are structured with a standard form for all clients. Dates of notification, treatment and contact tracing are recorded in the notes in a prescribed manner. The audit also assessed the quality of record keeping; clients notes were reviewed to ensure all recorded positives were true positive cases, that correct treatment was given and clear dating of informing, treating and contact tracing occurred.

## **Patients and methods**

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### PATIENT SELECTION

The study was a retrospective audit of clients who presented to Clinic 275 between 1 January and 31 December 2001 and were found to be positive for chlamydia. All patients recorded in the clinic database with chlamydial infection as a diagnosis were selected for the audit.

### INFORMATION

Client notes were used to extract data relevant to the audit, all data collected were anonymous. When data in client notes were not adequate, contact tracing documentation was used to verify information. Additional information included date of birth, gender, treatment, symptoms and presentation category.

Time zero was allocated to the date of chlamydia testing. The dates of informing, treatment and contact tracing were used to determine the time to informing, time to treatment and time to contact tracing, respectively. Information from the contact tracing interview was used to verify the dates if these were unclear in the client notes.

Three categories were used for presentation: asymptomatic, symptomatic and contacts. Asymptomatic clients were those without symptoms. Symptomatic patients were those presenting with urethral or vaginal symptoms or pelvic pain. Contacts were sexual partners of clients known to be infected with chlamydia, regardless of demonstrable symptoms.

### STATISTICAL ANALYSIS

The three time frames of interest were calculated for each client. Data were analysed using Stata 7 software and Student's t-test to identify significant differences ( $p = 0.05$ ) between the follow up of clients, depending on age (group 1 <25 years and group 2 >25 years) or gender. Further analysis using ttests was used to determine differences in follow up between the three presenting groups, asymptomatic, symptomatic and contacts.

## **Results**

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During the period 1 January to 31 December 2001, 349 clients were identified as being positive for chlamydia. Four cases were negative for chlamydia, three were miscoded and one was the result of incorrect data entry. Twenty one cases were referred to the clinic from general practitioners after positive chlamydia tests, as these patients had not been fully processed by the clinic they were excluded from the audit. Therefore, 324 clients were audited; 205 (63%) males and 119 (37%) females, mean age 25 years (range 15-55). Eight cases (2.5%) were lost to follow-up; only one was lost completely to all follow up, another client was informed of the result but did not return for treatment or contact tracing. Of the other clients lost to follow up, one was an foreign national who was treated shortly before returning overseas and could not be informed or contact traced; five clients were treated at presentation, informed of their results but declined to return for contact tracing.

**Table 1: The average time in days for the three measures of success of follow up for all clients, and a breakdown for the three presentations.**

Client	Number	Time to inform	Time to treatment	Time to contact trace
All	324	5.7	4.1	8.9
Asymptomatic	188	5.4	7.1	7.7
Symptomatic	40	4.8	0	7.7
Contacts	96	6.6	0	11.8

The average time to inform all clients of a positive result for chlamydia was 5.7 days (Table 1), median 5 days (Table 2). Ninety percent of clients were informed of their positive test result within 10 days and the maximum time was 75 days (Table 2). For the asymptomatic, symptomatic and contacts subgroups the average times to inform were 5.4, 4.8 and 6.6 respectively (Table 1).

The average time taken to treat all patients was 4.1 days (Table 1), however this includes symptomatic clients and contacts who were treated on the day of presentation. The average time to treatment of asymptomatic clients was 7.1 days (Table 1), median 6 days (Table 2). The maximum time to treatment was 35 days, though 90% of clients were treated within 13 days (Table 2).

**Table 2: Three measures of success of follow up using the median time (p50), the 90<sup>th</sup> percentile (p90) and the maximum time (Max.), for all clients and subgroups.**

Client	Time to inform			Time to treatment			Time to contact trace		
	p50	p90	Max.	p50	p90	Max.	p50	p90	Max.
All	5	10	75	-	-	-	7	18	75
Asymptomatic	5	8	35	6	13	35	7	13	55
Symptomatic	5	7	14	-	-	-	7	14	36
Contacts	5	10	75	-	-	-	7	24	75

The average time taken to contact trace all patients was 8.9 days (Table 1); the median time for all clients and all subgroups was 7 days (Table 2). The maximum time taken to contact trace a client was 75 days, this client was in the contacts subgroup. The average for the contacts subgroup (11.8 days) was higher than that of asymptomatic (7.7 days) and symptomatic (7.7 days) subgroups (Table 2). The difference in the time to contact trace between the contacts and each of the other subgroups was significant ( $p = 0.001$ ).

**Table 3: Comparison of the three measure of success between clients younger than 25 years and those older than 25 years.**

Clients	Time to inform	Time to treatment	Time to contact trace
<25 years	4.7	6.4	6.6
>25 years	6.2	7.8	8.8
t-test p value	0.012	0.095	0.025

The data were also analysed to see if the age or sex of the client influenced the success of follow up. The age division was set at the mean (25 years), producing 2 groups, those younger and older than 25 years. The average time taken to inform younger clients was 4.7 days and older clients 6.2 days ( $p$  value of 0.012). The average time to contact trace was also significant ( $p=0.025$ ), younger clients took 6.6 days and older clients 8.8 days. While the average time to treatment was 6.4 days in younger clients and 7.8 days in older clients, this result was not significant (Table 3).

There was no significant difference in the time to inform, treat or contact trace either sex (Table 4).

**Table 4: Comparison of the three measures of success between male clients (n=205) and female clients (n=119).**

Clients	Time to inform	Time to treatment	Time to contact trace
Male	5.7	7.12	8.1
Female	4.8	7.014	7.1
t-test p value	0.220	0.896	0.317

The audit also reviewed treatment regimens, all clients who received treatment (322) were treated appropriately.

An audit of documentation showed that in 81 (25%) cases, the notes were unclear as to when the client was informed of a positive chlamydia result. When treating clients, doctors record both the treatment given and the date. In all cases where clients were treated on the day of presentation (symptomatic clients and contacts) documentation was adequate. Among 188 asymptomatic clients were 55 cases (29%) where the date of treatment was incorrectly documented. In the documentation of the date of contact tracing only 5 cases (2%, n=316) were unclear. Four asymptomatic cases had coding errors, such that diagnosis and treatment of chlamydia was not properly coded, this information failing to be corrected at review. Despite this, all four cases were correctly followed up with treatment and contact tracing.

## Discussion

This audit was, in part, instigated by a draft for discussion by the MSSVD/AGUM Clinical Effectiveness Group<sup>9</sup>; it proposes a set of standards for the treatment and satisfactory partner notification for gonorrhoea and chlamydia within the United Kingdom (UK). It recommends that satisfactory treatment should be established in 60% of clients within 4 weeks of diagnosis. This audit was designed to focus on important time periods in client follow up, the time to informing a client of a positive result, and times to treatment and contact tracing.

Clinic 275 is currently treats clients well within the time periods suggested, with a median time to treatment for all clients of two days, and the 90<sup>th</sup> percentile being 10 days. However, these figures include data for clients who were treated at first presentation, that is, those with known exposure to chlamydia and those who have demonstrable urethritis on presentation. The timeframe for the asymptomatic group is a more sensitive indicator of success of the clinic in follow up. The median time to treatment of asymptomatic clients was six days, and 90% were treated within 13 days. Therefore the clinic has clients returning for results and treatment well within the suggested timeframes from the UK guidelines.

There is a distinction between treatment and the establishment of treatment. The UK guidelines state that test of cure is unnecessary in chlamydia, and establishment of satisfactory treatment can be done via interview at a clinic or by telephone. Establishing that the treatment was well tolerated and the patient is symptom free and abstained from, or used protection during, sex is part of the standard follow up interview at Clinic 275. The audit showed that all patients with chlamydia were treated appropriately.

Few studies have looked at the length of time for follow up as a measure of success. A thesis from Sweden reports the median time between examination of the index patient and the start of contact tracing in Swedish STI and family planning clinics was 12 days<sup>6</sup>. At Clinic 275 the median time to contact tracing is 7 days and 90% of clients are contact traced within 18 days. Staff at Clinic 275 are effective at encouraging clients to undergo contact tracing and this is reflected in the shorter time frames to contact tracing than in similar clinics in Sweden. The 90<sup>th</sup> percentiles of asymptomatic and symptomatic subgroups for contact tracing were 13 days and 14 days respectively. However, in clients who were contacts, the 90<sup>th</sup> percentile was 24 days and this difference was significant.

It is unclear why contacts are less willing to undergo contact tracing themselves, but it could be argued that the other two subgroups have presented to the clinic independently and have a different attitude towards the clinic. Clinic staff need to re-enforce the importance of contact tracing among those who present as chlamydia contacts.

That older clients took longer to follow up than their younger counterparts was a surprise. Many would expect younger individuals to be more difficult to contact. As clients presenting to Clinic 275 only represent a subset of the total population, this may not apply elsewhere. Why older clients are more difficult to follow up is unknown, however the clinic should stress the importance of follow up when dealing with clients, particularly those over 25 years.

The drop out rate from Clinic 275 was 2.5%, far below reported losses to follow up at other clinics. The UK guidelines report only 63.7% of clients with chlamydia returning for follow up, while other studies indicate drop out rates of 20-30%<sup>10</sup>. Only two clients were not treated, both were asymptomatic on presentation.

Documentation of clinic notes is standardised and generally of a high quality, however two sections require improvement. In 25% of cases, the notes were unclear about when the client was informed of a positive chlamydia result. As the mean time to inform indicates, the contact tracers are effective with the majority of clients informed of a positive result before returning to the clinic. The date when the client is informed, usually by the contact tracer, is entered into both the client notes and the contact tracing documents. In some cases this information was not entered correctly into the client notes, or alternatively, the contact tracer was not able to contact the client before their return to the clinic. Doctors give clients all results, irrespective of whether a contact tracer has informed the patient of a particular result; in addition to noting the date of informing the client, doctors should note whether the client has been previously informed of the positive result by the contact tracers.

The other area of documentation that was not clear was the dating of treatment. As the notes are very structured; treatment is written and dated in the treatment section of client notes. It is standard practice that treatment given at the initial consultation does not require dating. However, in 30% of cases where treatment for chlamydia was given at a follow up consultation, the treatment was either entered or dated incorrectly. While the notes were sufficiently clear to show that all clients were treated appropriately, more care needs to be taken by the medical staff to fill out the notes correctly. In the documentation of contact tracing, the notes were only unclear in 2% of cases.

The audit also looked at the coding of notes, which allows them to be entered into a database. In four cases diagnosis and treatment of chlamydia was entered into the notes appropriately, but failed to be coded correctly. Similarly, there were four cases which had been incorrectly coded or entered into the database as chlamydia, but were not chlamydia cases. This represents an error rate of 2.3%.

This audit indicates that Clinic 275 was successful in the follow up of clients with chlamydia during 2001. Follow up of clients occurred well within recommended timeframes from UK guidelines and within timeframes achieved from similar clinics in Sweden. Some improvement is possible in documentation, but it is generally of a high standard. Further insight into the clinic's success in follow up may be gained by an audit investigating the yield of contact tracing, success of treating those contact traced and the timeframes involved in follow up of contacts traced from the initial contact tracing interview.

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# HIV INFECTION IN SOUTH AUSTRALIA

## HIV Infection 1985 - 30/09/02

In South Australia, 834 individuals have been diagnosed with HIV infection, 753 (90%) males and 81 (10%) females. Of the males, 576 (76%) reported male-to-male sexual contact, 57 (8%) reported injecting drug use and 33 (4%) reported both risk factors. Heterosexual transmission was reported by 49 (61%) females diagnosed with HIV infection, 26 (31%) females reported injecting drug use (Table 1.1).

## HIV Infection 01/07/02 - 30/09/02

Ten individuals (9 male, 1 female) were diagnosed with HIV infection during the third quarter (Table 1.2). Eight men reported male-to-male sexual contact as their risk factor, while one male reported male-to-male sexual contact and injecting drug use.

## Newly acquired infections

Of the nine males diagnosed during the third quarter four had acquired their infection in the preceding 12 months.

Three of the four men reported male-to-male sexual contact as their risk factor and one male reported male-to-male and injecting drug use as his risk factor (Table 1.3). Newly acquired cases are infections acquired in the last 12 months, and are identified by negative serology in the preceding 12 months or diagnosed seroconversion illness in the preceding 12 months.

## Laboratory Screening For HIV Infection 01/07/02 - 30/09/02

During the third quarter of 2002, 17881 screening tests were performed, 8212 (46%) on males, 9657 (54%) on females and 12 tests on individuals whose sex was unknown (Table 1.5).

**Table 1.1 HIV infection detected in South Australia, 1985 - 30/09/2002. Exposure category by sex.**

Exposure category	Male		Female		Total	
	No.	%	No.	%	No.	%
Homosexual contact	576	76	na		576	69
Homosexual contact/IDU	33	4	na		33	4
Heterosexual contact	48	6	49	61	97	12
IDU	57	8	26	31	83	10
Blood products	7	1	2	3	9	1
Other	4	1	3	4	7	1
Unknown	28	4	1	1	29	3
<b>Total</b>	<b>753</b>		<b>81</b>		<b>834</b>	

na not applicable

**Table 1.2 HIV infection detected in South Australia, 01/07/02 - 30/09/02 and year to date. Exposure category by sex.**

Exposure category	3rd Quarter		Year to date	
	01/07/02 - 30/09/02		01/01/02 - 30/09/02	
	Male	Female	Male	Female
Homosexual	8	na	16	na
Homosexual/IDU	1	na	3	na
Heterosexual/IDU	-	-	-	1
Heterosexual contact	-	1	2	5
<b>Total</b>	<b>9</b>	<b>1</b>	<b>21</b>	<b>6</b>

na not applicable

**Table 1.3 Newly acquired infections (Incident cases\*) of HIV infection, 01/07/02 - 30/09/02 and year to date. Exposure category by sex.**

Exposure category	3rd Quarter		Year to date		
	01/07/02 - 30/09/02		01/01/02 - 30/09/02		
	Male	Female	Male	Female	Total
Homosexual	3	na	3	na	3
Homosexual/IDU	1	na	2	na	2
<b>Total</b>	<b>4</b>	<b>-</b>	<b>5</b>	<b>-</b>	<b>5</b>

\* Incident case - negative serology in the preceding 12 months or diagnosed seroconversion illness in the preceding 12 months

**Table 1.4 HIV infection in males in South Australia, 01/07/02 - 30/09/02 and year to date. Case category by age at diagnosis.**

Case category	3rd Quarter			Year to date		
	01/07/02 - 30/09/02			01/01/02 - 30/09/02		
	Age group (years)			Age group (years)		
	<25	25 - 39	40+	<25	25 - 39	40+
Newly acquired <sup>1</sup>	2	1	1	2	2	1
Greater than 12 months <sup>2</sup>	-	-	-	-	5	3
Uncertain duration <sup>3</sup>	-	3	2	-	-	6
Known positive overseas	-	-	-	-	1	1
<b>Total</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>8</b>	<b>11</b>

<sup>1</sup> Incident case - negative serology in the preceding 12 months or diagnosed seroconversion illness in the preceding 12 months.

<sup>2</sup> Infection likely to be greater than 12 months - risk behaviour confined to more than 12 months ago or diagnosed seroconversion illness more than 12 months ago.

<sup>3</sup> Uncertain duration- tested for the first time this year and no seroconversion illness or AIDS defining illness present.

**Table 1.5 Summary of HIV antibody tests, 01/07/02 - 30/09/02 and year to date. Laboratory by sex.**

Laboratory	3rd Quarter 01/07/02 - 30/09/02			Year to date 01/01/02 - 30/09/02			Total
	Male	Female	Unknown	Male	Female	Unknown	
Public	5041	6127	-	14781	18346	139	33266
Private	3171	3530	12	9858	13649	16	23523
<b>Total</b>	<b>8212</b>	<b>9657</b>	<b>12</b>	<b>24639</b>	<b>31995</b>	<b>155</b>	<b>56786</b>

# HEPATITIS C SURVEILLANCE IN SOUTH AUSTRALIA

## Hepatitis C Medical Notification 01/07/02 - 30/09/02

In the third quarter of 2002, medical notifications of hepatitis C infection were received for 214 individuals, 147 (69%) males and 67 (31%) females. The number of notifications is similar to that of the previous quarter (211), but fewer than in the same period in 2001 (283).

Thirty-five cases were reported as having an earlier positive test (pre-1995), whilst 67 individuals had never been tested before for hepatitis C infection; in a further 77 cases the testing history was unknown. Of 35 individuals with a previous negative test, 27 were tested more than 12 months earlier and seven were tested within the last year. Among the 179 new diagnoses, 128 (72%) reported past or present injecting drug use as a likely transmission route for hepatitis C virus (Table 2.1).

At the time of diagnosis, the majority of males (86%) were aged between 20 and 49 years, while most females (58%) were in the 20 to 39 year age range (Table 2.2). Four males and two females were aged less than twenty years at diagnosis, all had a history of injecting drug use.

### Newly acquired infections - Incident cases

Incident cases are infections acquired in the last 12 months, and are identified by recent seroconversion for hepatitis C antibodies or a positive test accompanied by acute clinical illness not ascribed to other causes.

Eight incident cases were identified during the quarter, seven had negative serology in the preceding 12 months and one had clinical hepatitis. The incident cases comprised five males and three females. In seven cases the likely mode of transmission for hepatitis C virus was injecting drug use; the transmission route is not yet known in one case (Table 2.3). At diagnosis most were in the 20-29 age-group (Table 2.4).

Collated laboratory data for hepatitis C antibody tests performed during the quarter are shown in Table 2.5.

**Table 2.1 Hepatitis C infection, new diagnoses 01/07/02 - 30/09/02 and year to date. Exposure category by sex.**

Exposure category	3rd Quarter 01/07/02 - 30/09/02		Year to date 01/01/02 - 30/09/02		
	Male	Female	Male	Female	Total
IDU <sup>1</sup>	78	33	228	104	332
IDU/Tattoos	17	-	52	13	65
Blood transfusion/ products	2	5	12	19	31
Tattoos	7	2	22	11	33
Other <sup>2</sup>	4	2	11	7	18
High prevalence country <sup>3</sup>	11	3	29	16	45
Unknown	10	5	34	19	53
<b>Total</b>	<b>129</b>	<b>50</b>	<b>388</b>	<b>189</b>	<b>577</b>

<sup>1</sup> Includes IDU in combination with categories other than tattoos.

<sup>2</sup> Includes occupational exposure; household, perinatal & sexual transmission; body piercing/ acupuncture; assault.

<sup>3</sup> Residence/medical treatment in a high prevalence country overseas.

**Table 2.2 Hepatitis C infection, new diagnoses 01/07/02 - 30/09/02 and year to date. Age group by sex.**

Age group (years)	3rd Quarter 01/07/02 - 30/09/02		Year to date 01/01/02 - 30/09/02		
	Male	Female	Male	Female	Total
10 - 19	4	2	11	12	23
20 - 29	39	14	95	58	153
30 - 39	41	15	132	58	190
40 - 49	31	12	110	40	150
? 50	14	7	40	21	61
<b>Total</b>	<b>129</b>	<b>50</b>	<b>388</b>	<b>189</b>	<b>557</b>

**Table 2.3 Newly acquired infections (Incident cases\*) of hepatitis C infection, 01/07/02 - 30/09/02 and year to date. Exposure category by sex.**

Exposure category	3rd Quarter 01/07/02 - 30/09/02		Year to date 01/01/02 - 30/09/02		
	Male	Female	Male	Female	Total
IDU	4	3	18	11	29
IDU/Tattoos	-	-	1	-	1
Sex partner HCV+	-	-	-	1	1
Blood exposure	-	-	1	-	1
Not identified	-	-	1	-	1
Unknown	1	-	1	2	3
<b>Total</b>	<b>5</b>	<b>3</b>	<b>22</b>	<b>14</b>	<b>36</b>

\* Incident cases are newly acquired infections, see text.

**Table 2.4 Newly acquired infections (Incident cases\*) of hepatitis C infection, 01/07/02 - 30/09/02 and year to date. Age group by sex.**

Age group (years)	3rd Quarter 01/07/02 - 30/09/02		Year to date 01/01/02 - 30/09/02		
	Male	Female	Male	Female	Total
10 - 19	-	-	1	4	5
20 - 29	4	2	13	7	20
30 - 39	1	-	7	2	9
? 40	-	1	1	1	2
<b>Total</b>	<b>5</b>	<b>3</b>	<b>22</b>	<b>14</b>	<b>36</b>

\* Incident cases are newly acquired infections, see text.

**Table 2.5 Summary of laboratory tests for hepatitis C antibodies, 01/07/02 - 30/09/02 and year to date. Laboratory by sex.**

Laboratory	3rd Quarter 01/07/02 - 30/09/02			Year to date 01/01/02 - 30/09/02			Total
	Male	Female	Unknown	Male	Female	Unknown	
Public	5407	6513	-	15827	19510	22	35359
Private	3319	3546	-	10026	11190	-	21216
<b>Total</b>	<b>8726</b>	<b>10059</b>	<b>-</b>	<b>25853</b>	<b>30700</b>	<b>22</b>	<b>56575</b>

# HEPATITIS B SURVEILLANCE IN SOUTH AUSTRALIA

## Hepatitis B Medical Notification 01/07/02 - 30/09/02

During the third quarter of 2002, 74 hepatitis B medical notifications were received. Of these, four were acute clinical cases of hepatitis B infection (Tables 3.1, 3.2). A further 11 were reports of chronic carriers of greater than 12 months duration, who had been previously diagnosed, but not notified (Table 3.3). Reports of antigen positivity of uncertain duration accounted for 58 cases (Table 3.3). There was one report of antigen positivity of less than 12 months duration (defined by a negative surface antigen test in the 12 months prior to diagnosis) (Table 3.3).

Exposure categories identified for the acute clinical cases were injecting drug use (1), overseas travel (1), and unknown risk factors (2) (Table 3.1).

Of the 58 reports of antigen positivity of uncertain duration, 43 tested surface antigen positive for the first time this quarter, one had a positive test in the preceding 12 months and the testing history was unknown for the remaining 14 cases. Among the 43 individuals who tested surface antigen positive for the first time, but were not acute cases, the racial origin of 24 (56%) was reported as Asian (Table 3.4).

The number of hepatitis B surface antigen tests performed by laboratories for this quarter is shown in Table 3.5.

**Table 3.1 Acute hepatitis B infection, 01/07/02 - 30/09/02 and year to date. Exposure category by sex.**

Exposure category	3rd Quarter 01/07/02 - 30/09/02		Year to date 01/01/02 - 30/09/02		
	Male	Female	Male	Female	Total
IDU	1	-	1	-	1
Homosexual contact	-	-	2	-	2
Heterosexual contact	-	-	-	1	1
Overseas travel	-	1	-	1	1
Country of birth	-	-	1	-	1
None identified	1	1	2	1	3
<b>Total</b>	<b>2</b>	<b>2</b>	<b>6</b>	<b>3</b>	<b>9</b>

**Table 3.2 Acute hepatitis B infection, 01/07/02 - 30/09/02 and year to date. Age group by sex.**

Age group (years)	3rd Quarter 01/07/02 - 30/09/02		Year to date 01/01/02 - 30/09/02		
	Male	Female	Male	Female	Total
<10	-	-	1	-	1
10 - 19	-	1	-	1	1
20 - 29	1	-	2	1	3
30 - 39	1	1	1	1	2
? 50	-	-	2	-	2
<b>Total</b>	<b>2</b>	<b>2</b>	<b>6</b>	<b>3</b>	<b>9</b>

**Table 3.3 Hepatitis B infection, 01/07/02 - 30/09/02 and year to date. Case category by sex.**

Case category	3rd Quarter 01/07/02 - 30/09/02		Year to date 01/01/02 - 30/09/02		
	Male	Female	Male	Female	Total
Acute infection	2	2	6	3	9
Antigen positive- <12 months duration	-	1	-	1	1
Antigen positive- uncertain duration	35	23	98	66	164
Chronic carriers- >12 months duration	4	7	14	18	32
<b>Total</b>	<b>41</b>	<b>33</b>	<b>118</b>	<b>88</b>	<b>206</b>

**Table 3.4 Individuals who tested hepatitis B surface antigen positive for the first time, 01/07/02 - 30/09/02 and year to date. Race by sex.**

Racial origin	3rd Quarter 01/07/02 - 30/09/02		Year to date 01/01/02 - 30/09/02		
	Male	Female	Male	Female	Total
Aboriginal	1	2	4	3	7
Asian	13	11	35	33	68
Caucasian	11	4	28	8	36
Other/unknown	-	1	4	5	9
<b>Total</b>	<b>25</b>	<b>18</b>	<b>71</b>	<b>49</b>	<b>120</b>

**Table 3.5 Summary of hepatitis B surface antigen tests, 01/07/02 - 30/09/02 and year to date. Laboratory by sex.**

Laboratory	3rd Quarter 01/07/02 - 30/09/02			Year to date 01/01/02 - 30/09/02			Total
	Male	Female	Unknown	Male	Female	Unknown	
Public	5052	6943	16	14792	20850	76	35718
Private	2423	3913	-	7643	11572	-	19215
<b>Total</b>	<b>7475</b>	<b>10856</b>	<b>16</b>	<b>22435</b>	<b>32422</b>	<b>76</b>	<b>54933</b>

## GENITAL CHLAMYDIAL INFECTION IN SOUTH AUSTRALIA

### Genital Chlamydial Infection 01/07/02 - 30/09/02

Between 1 July and 30 September 2002, medical practitioners notified 441 cases of genital chlamydial infection to Sexually Transmitted Diseases Services. There have been a greater number of cases reported in comparison to the same quarter last year (345). Approximately half the reported cases were from metropolitan doctors (49%), with 22% from Clinic 275 and 11% from rural doctors.

Of the 441 notifications, 170 (39%) cases occurred in males and 271 (61%) in females (Table 4.1). These figures are consistent with previous quarters. Seventy five percent of females and 57% of males diagnosed with chlamydia this quarter were asymptomatic.

Males and females aged less than 30 years accounted for 132 (77%) and 236 (85%) cases of genital chlamydial infection, respectively (Table 4.1). The majority of individuals (360, 81%) reported their racial origin as Caucasian (Table 4.2). Four hundred and ten (93%) individuals reported that they acquired the infection in South Australia.

The number of laboratory tests for genital chlamydia performed during this quarter is shown in Table 4.3.

**Table 4.1 Genital chlamydial infection in South Australia, 01/07/02 - 30/09/02 and year to date. Age group by sex.**

Age group (years)	3rd Quarter 01/07/02 - 30/09/02		Year to date 01/01/02 - 30/09/02		
	Male	Female	Male	Female	Total
< 20	17	97	311	73	384
20 - 24	72	96	279	207	486
25 - 29	43	43	159	136	295
30 - 34	23	20	45	68	113
35 - 40	10	8	28	27	55
? 40	5	7	25	25	50
<b>Total</b>	<b>170</b>	<b>271</b>	<b>537</b>	<b>846</b>	<b>1383</b>

**Table 4.2 Genital chlamydial infection, 01/07/02 - 30/09/02 and year to date. Race by sex.**

Racial origin	3rd Quarter 01/07/02 - 30/09/02		Year to date 01/01/02 - 30/09/02		
	Male	Female	Male	Female	Total
Aboriginal	29	16	50	90	141
Asian	19	2	13	48	61
Caucasian	217	143	689	447	1136
Other	3	5	18	12	30
<b>Total</b>	<b>170</b>	<b>271</b>	<b>537</b>	<b>846</b>	<b>1383</b>

**Table 4.3 Summary of laboratory tests for genital chlamydia, 01/07/02 - 30/09/02 and year to date. Laboratory by sex.**

Laboratory	3rd Quarter 01/07/02 - 30/09/02		Year to date 01/01/02 - 30/09/02		
	Male	Female	Male	Female	Total
Public	1726	3626	2617	7049	9666
Private	938	2380	4914	10884	15798
<b>Total</b>	<b>2664</b>	<b>6006</b>	<b>7531</b>	<b>17933</b>	<b>25464</b>

## GONOCOCCAL INFECTION IN SOUTH AUSTRALIA

### Gonococcal Infection 01/07/02 - 30/09/02

In the third quarter of 2002, 52 cases of gonococcal infection were notified to STD Services. Of the 52 cases notified, 40 (76%) occurred in males, and 12 (24%) in females (Table 5.1).

Gonococcal infection occurred in a wide age range with 29 cases (57%) occurring in males and females aged less than 29 years (Table 5.1).

The racial origin was reported as Aboriginal for six female cases (50%). In males, eight cases (21%) were Aboriginal and 31 (77%) were Caucasian (Table 5.2). The majority of individuals (48, 92%) acquired the infection in South Australia (Table 5.3).

The site of infection for the 21 males (51%) with gonococcal infection who reported male-to-male sexual contact is shown in Table 5.4.

**Table 5.1 Gonococcal infection detected in South Australia, 01/07/02 - 30/09/02 and year to date. Age group by sex.**

Age group (years)	3rd Quarter		Year to date		
	01/07/02 - 30/09/02		01/01/02 - 30/09/02		
	Male	Female	Male	Female	Total
< 20	2	4	11	15	25
20 - 24	9	3	19	12	31
25 - 29	9	2	23	9	32
30 - 34	7	1	13	10	23
35 - 39	7	1	15	6	21
? 40	6	1	18	3	21
<b>Total</b>	<b>40</b>	<b>12</b>	<b>99</b>	<b>58</b>	<b>157</b>

**Table 5.2 Gonococcal infection detected in South Australia, 01/07/02 - 30/09/02 and year to date. Racial origin by sex.**

Racial origin	3rd Quarter		Year to date		
	01/07/02 - 30/09/02		01/01/02 - 30/09/02		
	Male	Female	Male	Female	Total
Aboriginal	8	6	32	47	79
Asian	1	2	2	4	6
Caucasian	31	4	64	7	71
Other	-	-	1	-	1
<b>Total</b>	<b>40</b>	<b>12</b>	<b>99</b>	<b>58</b>	<b>157</b>

**Table 5.3 Gonococcal infection detected in South Australia, 01/07/02- 30/09/02 and year to date. Likely location of acquisition of infection by sex.**

Location	3rd Quarter 01/07/02 - 30/09/02		Year to date 01/01/02 - 30/09/02		
	Male	Female	Male	Female	Total
South Australia	37	11	83	46	129
Interstate	2	1	11	11	22
Overseas	1	-	5	1	6
<b>Total</b>	<b>40</b>	<b>12</b>	<b>99</b>	<b>58</b>	<b>157</b>

**Table 5.4 Gonococcal infection detected in homosexual men in South Australia, 01/07/02 - 30/09/02 and year to date. Site of infection.**

Site	3rd Quarter 01/07/02 - 30/09/02	Year to date 01/01/02 - 30/09/02	
	Number	Number	Total
Urethral	10	24	34
Rectal	7	16	23
Pharyngeal	3	5	8
Urine	1	3	4
<b>Total</b>	<b>21</b>	<b>48</b>	<b>69</b>



## CLINIC 275 ACTIVITY REPORT

Table 6.1 Clinic 275 - Summary Statistics

Diagnosis	3rd Quarter		Year to date		
	01/07/02 - 30/09/02		01/01/02 - 30/09/02		
	Male	Female	Male	Female	Total
No illness	469	362	1469	1223	2692
HIV	3	-	4	-	4
Gonorrhoea	16	2	39	3	42
Herpes	17	21	67	67	134
Chlamydia	69	39	206	143	349
NSU	26	na	69	na	69
Warts	211	84	625	288	913
Trichomoniasis	na	1	na	2	2
Candida vaginitis	na	57	na	193	193
Crabs	12	1	27	3	30
Scabies	2	na	7	na	7
Molluscum	51	16	150	48	198
Bacterial vaginosis	na	74	na	243	243
Hepatitis B antigen positive - acute carrier	-	-	-	-	-
	4	2	13	5	16
Hepatitis C infection - incident	-	-	1	2	3
new	-	1	3	3	6
known	15	9	42	25	67
Urethral irritation	40	na	133	na	133
Balanitis	48	na	147	na	147
Non STD illness	116	56	387	177	564
Post coital contraception	na	101	na	285	285
Abnormal Pap smear	na	15	na	67	67
Other/Uncertain	20	19	56	46	102
Clinic attendances	1939	2131	5708	4717	10425
Episodes of care	1052	788	2674	2070	4744
Individual clients	1006	757	3213	2537	5750

na not applicable

Note: A client may have more than one diagnosis for an episode of care. An individual client may have several episodes of care each requiring one or more attendances. Data on episodes of care and individual clients are from the computerised casenotes system based on date of first visit for an episode of care. Clinic attendances were obtained from the daybook for the time period covered by this report.

**Table 6.2 Males diagnosed with chlamydia, gonorrhoea or syphilis<sup>1</sup> at C275, 01/07/02 - 30/09/02. Exposure category by infection.**

Exposure category	No.	Chlamydia	Gonorrhoea
Homosexual	169	13	10
Homosexual, IDU	18	3	1
Bisexual	45	-	2
Bisexual, IDU	8	1	-
Heterosexual, IDU	86	1	1
Heterosexual	608	51	2
<b>Total</b>		69	16

<sup>1</sup> No case of syphilis diagnosed during the quarter.

**Table 6.3 Males diagnosed with hepatitis C, hepatitis B or HIV infection at C275, 01/07/02 - 30/09/02. Exposure category by infection.**

Exposure category	No.	Hepatitis C	Hepatitis B		HIV
		Known	Previous exposure <sup>1</sup>	Carrier	
Homosexual	169	1	10	-	3
Homosexual, IDU	18	1	-	-	-
Bisexual	45	-	2	-	-
Bisexual, IDU	8	1	-	-	-
Heterosexual, IDU	86	6	4	-	-
Heterosexual, O/S <sup>2</sup>	82	-	1	1	-
Heterosexual	608	6	5	1	-
Other	36	-	2	2	-
<b>Total</b>		15	24	4	3

<sup>1</sup> Previous exposure refers to past HBV infection (HB core antibody positive, HBs antigen negative).

<sup>2</sup> Overseas contact in the previous three months.

**Table 6.4 Females diagnosed with chlamydia, gonorrhoea or syphilis<sup>1</sup> at C275, 01/07/02 - 30/09/02. Exposure category by infection.**

Exposure category	No.	Chlamydia	Gonorrhoea
Heterosexual, IDU	53	3	-
Heterosexual	565	36	2
<b>Total</b>		39	2

<sup>1</sup> No case of syphilis diagnosed during the quarter.

**Table 6.5 Females diagnosed with hepatitis C, hepatitis B<sup>1</sup> or HIV<sup>1</sup> infection at C275, 01/07/02 - 30/09/02. Exposure category by infection.**

Exposure category	No.	Hepatitis C		Hepatitis B	
		Known	New Diagnoses	Previous exposure <sup>2</sup>	Carrier
Heterosexual, IDU	55	6	1	2	-
Heterosexual	601	-	-	12	1
Sex worker	19	1	-	-	-
Sex worker, IDU	9	1	-	1	-
Other/unknown	55	1	-	4	1
<b>Total</b>		9	1	19	2

<sup>1</sup> No new cases of HIV or acute hepatitis B infection in females during this quarter.

<sup>2</sup> Previous exposure refers to past HBV infection (HB core antibody positive, HBs antigen negative).

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**All data in this report are provisional and subject to future revision.**