

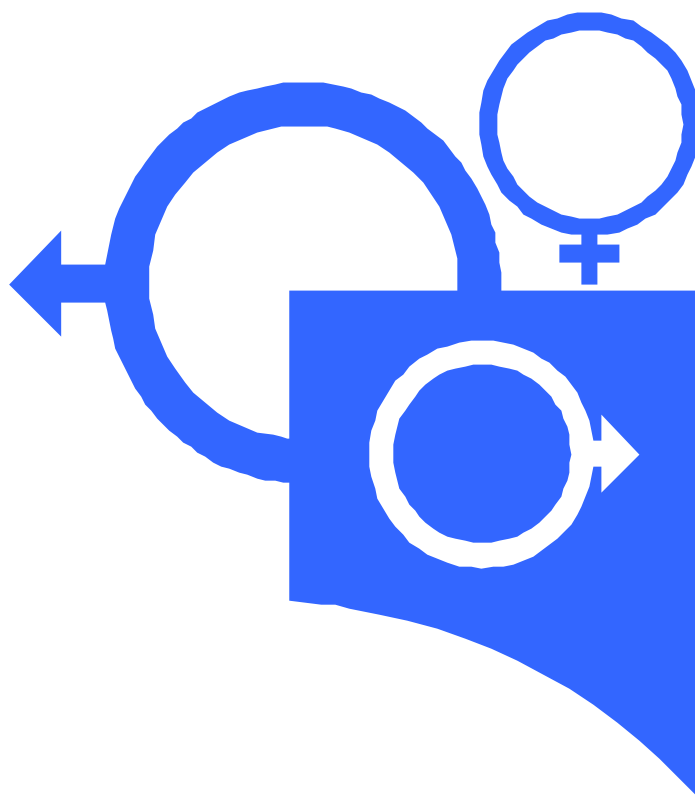
# Sexually Transmitted Diseases Services Quarterly Surveillance Report

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## Contents

List of Tables .....	2
A profile of HIV positive patients diagnosed in Clinic 275 .....	3
HIV infection in South Australia .....	10
Hepatitis C surveillance in South Australia.....	12
Hepatitis B surveillance in South Australia.....	15
Genital chlamydial infection in South Australia.....	17
Gonococcal infection in South Australia .....	19
Clinic 275 activity report.....	20

## List of Tables

Table 1.1	HIV infection detected in South Australia, 1985 - 31/12/01. Exposure category by sex.....	10
Table 1.2	HIV infection detected in South Australia, 01/10/01 - 31/12/01 and year. Exposure category by sex.....	11
Table 1.3	HIV infection detected in South Australia, 01/10/01 - 31/12/01 and year. Testing history by age group at diagnosis.....	11
Table 1.4	Summary of HIV antibody tests, 01/10/01 - 31/12/01 and year. Laboratory by sex.....	11
Table 2.1	Hepatitis C infection, new diagnoses 01/10/01 - 31/12/01 and year. Exposure category by sex.....	12
Table 2.2	Hepatitis C infection, new diagnoses 01/10/01 - 31/12/01 and year. Age group by sex.....	13
Table 2.3	Newly acquired infections (Incident cases) of hepatitis C infection, 01/10/01 - 31/12/01 and year. Exposure category by sex.....	13
Table 2.4	Newly acquired infections (Incident cases) of hepatitis C infection, 01/10/01 - 31/12/01 and year. Age group by sex.....	13
Table 2.5	Summary of laboratory tests for hepatitis C antibodies, 01/10/01 - 31/12/01 and year. Laboratory by sex.....	14
Table 3.1	Acute hepatitis B infection, 01/10/01 - 31/12/01 and year. Exposure category by sex.....	15
Table 3.2	Acute hepatitis B infection, 01/10/01 - 31/12/01 and year. Age group by sex.....	15
Table 3.3	Hepatitis B infection, 01/10/01 - 31/12/01 and year. Case category by sex.....	16
Table 3.4	Individuals who tested hepatitis B surface antigen positive for the first time, 01/10/01 - 31/12/01 and year. Race by sex.....	16
Table 3.5	Summary of hepatitis B surface antigen tests, 01/10/01 - 31/12/01 and year. Laboratory by sex.....	16
Table 4.1	Genital chlamydial infection in South Australia, 01/10/01 - 31/12/01 and year. Age group by sex.....	17
Table 4.2	Genital chlamydial infection, 01/10/01 - 31/12/01 and year. Race by sex.....	18
Table 4.3	Summary of laboratory tests for genital chlamydia, 01/10/01 - 31/12/01 and year. Laboratory by sex.....	18
Table 5.1	Gonococcal infection detected in South Australia, 01/10/01 - 31/12/01 and year. Age group by sex.....	19
Table 6.1	Clinic 275 - Summary Statistics.....	20
Table 6.2	Males diagnosed with chlamydia, gonorrhoea or syphilis at C275, 01/10/01 - 31/12/01. Exposure category by infection.....	21
Table 6.3	Males diagnosed with hepatitis C, hepatitis B or HIV infection at C275, 01/10/01 - 31/12/01. Exposure category by infection.....	21
Table 6.4	Females diagnosed with chlamydia, gonorrhoea or syphilis at C275, 01/10/01 - 31/12/01. Exposure category by infection.....	21
Table 6.5	Females diagnosed with hepatitis C, hepatitis B or HIV infection at C275, 01/10/01 - 31/12/01. Exposure category by infection.....	22

Training is an important educational aspect of STD Services; it encompasses local trainees and regular overseas visitors who wish to undertake further studies in venereology. Our feature article in this quarterly report is a project undertaken by a Visiting Fellow from Sri Lanka.

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### **A profile of HIV positive patients diagnosed in Clinic 275, Adelaide, SA, 1988-2000.**

The epidemic of human immunodeficiency virus (HIV) infection that causes acquired immunodeficiency syndrome (AIDS) has emerged as a serious public health problem in many parts of the world. Estimates at the end of 2000 suggest that 36 million men, women and children are living with HIV/AIDS worldwide and 22 million others have already lost their lives. The vast majority of infections occur in developing countries where HIV/AIDS has eroded indicators such as child survival, life expectancy and economic development<sup>1</sup>.

In Australia, an estimated 12,440 people were living with HIV infection by the end of 2000. A decline in annual incidence of AIDS has been observed since 1994<sup>2</sup>, however, Australia's experience of HIV/AIDS needs to be viewed in the context of a global pandemic.

In addition to providing patient care, Clinic 275 collects epidemiological information and acts as a sentinel site for STD and HIV/AIDS in South Australia<sup>3</sup>. The clinic maintains a comprehensive database for all clinic attendees. In addition, the surveillance unit of STD Services maintains separate databases for the notification of HIV/AIDS and notifiable STD<sup>4</sup>.

This study examines data related to HIV positive patients diagnosed in Clinic 275 from 1988 to 2000. Objectives of this study were to describe the socio-demographic and clinical characteristics of HIV cases, to identify risk factors for HIV infection and to compare information available in the clinic and surveillance databases related to these patients.

### **Methods**

The study consisted of three parts; a descriptive phase, a case control study and a comparative study involving two databases.

Data from STD Services were used for this study. A database in Clinic 275 is maintained for clinic management and computerisation of patient records (clinic database). Another database is maintained for statewide HIV/AIDS notification by the surveillance unit (surveillance database). A total of 553 HIV positive patients were notified to the surveillance unit during the study period (1988-2000).

The study sample consisted of all patients found to be HIV positive during a visit to Clinic 275 in the period 1988 to 2000 (127 cases). The group was described using both clinic and surveillance database information as these sources are complementary.

The case control study was used to study risk factors for being HIV positive in the study group. All new male HIV positive cases (120) detected at Clinic 275 during the study period were defined as cases. Females were omitted from this case control study as the numbers are too small for meaningful analysis. HIV negative patients who attended the Clinic 275 during the same period acted as controls. The sample size for the number of controls was calculated using Epi Info software, a case to control ratio of 1:3 gave power of 80% at a confidence level of 95%. As 120 cases were available for the study, 358 HIV negative cases were randomly selected as controls from the clinic database and controls and cases were matched by year of clinic attendance.

A comparative study using both databases was done to validate the information available on the same 127 HIV positive clients. Data files containing details of the study group were prepared from both clinic and surveillance databases. A unique variable for each case was created in both data files using the date of birth and name-code. These files were merged using the unique variable, and cross tabulations compared the information.

Analysis of data was carried out using Stata (version 7) software.

## Results

### Study population and characteristics

A total of 127 patients were diagnosed as HIV positive at Clinic 275 from 1988 to 2000. Of these, 120 (95%) were males and seven (5%) were female. The mean age of males was 32.2 years, and females was 30.0 years.

The demographic and clinical characteristics of all HIV cases who were diagnosed at Clinic 275 during the study period of 1988 to 2000 are summarised in Table 1. The majority of patients were in the age group 20 to 49 years (84%), single (80%), and Caucasian (91%). Twenty eight percent were professionally employed and 18% were manual workers. Only one person (0.8%) was in massage parlour or sex worker employment.

Thirty six per cent of patients probably acquired the infection in South Australia. However, in 50% of cases this information was not available. Homosexual exposure was responsible for 82% of infections.

Thirty five cases had been diagnosed with one or more AIDS defining illnesses. Common conditions were PCP (17%), Kaposi's sarcoma (17%), oral/oesophageal candidiasis (14%) and encephalopathy (14%).

According to information updated at the end of 2000, 82 (65%) patients in the study sample were living with HIV, and 13 (10%) living with AIDS in South Australia. The number of deaths due to AIDS was 19 (15%) and in eight cases the current status was not known.

### Case control study

Univariate analysis of risk factors for HIV infection was undertaken in the case control study on male HIV positive cases and HIV negative controls from STD clinic attendees (Table 2). The results show that being in the age group of 35-39 years, single, homosexual or bisexual and having a past history of STD were significantly associated with HIV infection.

Logistic regression analysis was performed to exclude confounding in the associations found in univariate analysis. All variables were included in the model. A history of same sex or bisexual exposure during the last 12 months remained as the strongest risk factor for HIV infection in the study group. In addition, being in the age group of 35-39 years, non-Caucasian and having a history of STD remained statistically significant associations for HIV infection in this group of patients (Table 3).

### Comparison of data in clinic and surveillance databases

A unique variable incorporating name-code and date of birth was created to merge the two database files for comparison of information, therefore comparison of name-codes or ages from the two databases was not done.

The gender of cases was similar in the two databases (Table 4.1). A comparison was made of marital status, occupational status, and ethnicity of cases in the two databases. About half of these variables were recorded in the surveillance database as unknown (Tables 4.2 to 4.4). Different classifications were found in the two databases for occupation and ethnicity.

**Table 1. Characteristics of HIV infected persons diagnosed at Clinic 275, 1988-2000**

Characteristic		No. (n=127)	Percentage
Gender	Male	120	94.5
	Female	7	5.5
Age at diagnosis (years)	10-19	2	1.6
	20-29	56	44.1
	30-39	50	39.4
	40-49	14	11.0
	50-59	5	3.9
Marital status	Never married	102	80.3
	Married/defacto	14	11.0
	Widowed/ divorced/ separated	11	8.7
Employment	Unemployed	20	15.8
	Student	15	11.8
	Massage/ sex worker	1	0.8
	Home duties	1	0.8
	Professional	36	28.4
	Para professional	11	8.7
	Office worker	15	11.8
	Manual worker	23	18.1
	Other	5	3.9
Race	Caucasian	115	90.6
	Asian	4	3.1
	Aboriginal	1	0.8
	Other	7	5.5
Location of acquiring HIV	South Australia	46	36.2
	Interstate	9	7.1
	Overseas	8	6.3
	Unknown	64	50.4
Mode of infection	Homosexual	104	81.9
	Heterosexual	10	7.9
	Heterosexual/ IDU	8	6.3
	Homosexual/ IDU	2	1.6
	Bisexual	2	1.6
	Unknown	1	0.8
AIDS diagnostic conditions <sup>1</sup> (n=35)	PCP	6	17.0
	Kaposi's sarcoma	6	17.0
	Oral/oesophageal candidiasis	5	14.4
	Encephalopathy	5	14.4
	Wasting	3	8.6
	Cytomegalovirus infection	3	8.6
	Herpes simplex virus infection	3	8.6
	Mycobacteriosis	2	5.7
	Other	2	5.7
Current status <sup>2</sup>	HIV in South Australia	82	64.6
	AIDS deaths	19	15.0
	AIDS in South Australia	13	10.2
	Overseas/interstate	5	3.9
	Unknown	8	6.3

<sup>1</sup> Includes both definitive and presumptive cases<sup>2</sup> As updated by the surveillance system at the end of 2000

**Table 2. Risk of HIV infection in univariate analysis**

Characteristic		Case	Control	Odds ratio (95% C.I.)	P value
1. Age (years)	15- 24	27	130	1	-
	25- 29	26	80	1.6 (0.9-2.9)	0.14
	30- 34	28	64	2.1 (1.1-3.9)	0.06
	35- 39	20	32	3.0 (1.5-6.2)	0.002*
	=40	19	52	1.7 (0.9-3.5)	0.10
2. Marital status	Single	101	259		
	Married/ widowed/ divorced/separated	19	99	0.5 (0.3- 0.9)	0.009*
3. Employment	Unemployed	20	83		
	Employed/ student	100	275	1.4 (0.9- 2.4)	0.17
4. Race	Caucasian	11	347		
	Non-Caucasians	10	110	2.9 (1.2- 6.9)	0.02*
5. Number of partners (last 3 months)	1 or none	74	244		
	>1	46	114	1.3 (0.7- 2.0)	0.19
6. Type of exposure (last 12 months)	Heterosexual/none	17	278		
	Homo/ bisexual	103	80	21.1 (10.5-42.1)	0.000*
7. Place of exposure (last 12 months)	SA only/ nil	100	309		
	Interstate/ overseas	20	49	1.2 (0.7- 2.2)	0.42
8. Steady partner	Yes	58	158		
	No	62	200	0.8 (0.6- 1.3)	0.42
9. Risk of exposure to blood	No	71	217		
	Yes	38	108	1.1 (0.68-1.7)	0.75
10. Circumcision status	Circumcised	81	220		
	Not circumcised	39	138	0.77 (0.49-1.1)	0.24
11. Past history of STD	No	67	280		
	Yes	53	78	2.8 (1.8-4.4)	0.000*

\* Significant P values

**Table 3. Logistic regression model for risk of HIV infection**

Characteristic	Odds ratio	P value	95% C.I.
1. Age group (years)			
25- 29	2.1	0.1	0.9-4.6
30- 34	1.6	0.2	0.7-3.7
35- 39	2.8	0.04*	1.1-7.6
= 40	1.9	0.2	0.8-4.9
2. Marital status (Single)	0.5	0.08	0.2-1.1
3. Employment (Employed and students)	1.3	0.4	0.7-2.6
4. Race (Non-Caucasian)	4.2	0.03*	1.1-15.8
5. Number of partners, last 3 months (>1)	0.8	0.5	0.4-1.5
6. Type of exposure, last 12 months (Homosexual/bisexual)	21.2	0.00*	10.9-40.9
7. Place of exposure, last 12 months (Interstate/overseas)	0.9	0.8	0.4-2.0
8. Steady partner (No)	0.8	0.6	0.5-1.5
9. Risk of exposure to blood (Yes)	1.4	0.2	0.8-2.6
10. Circumcision status (No)	1.1	0.8	0.6-2.0
11. Past history of STD (Yes)	1.9	0.03*	1.04-3.4

\* Significant P values

**Table 4.1 Comparison of gender**

		<b>Clinic data</b>		
		Male	Female	Total
<b>Surveillance data</b>	Male	120	0	120
	Female	0	7	7
<b>Total</b>		120	7	127

**Table 4.2 Comparison of marital status**

		<b>Clinic data</b>			Total
		Single	Married/defacto	W/S/D*	
<b>Surveillance data</b>	Never married	47	4	2	53
	Married/defacto	1	3	0	4
	W/S/D*	0	0	6	6
	Unknown	54	7	3	64
<b>Total</b>		102	14	11	127

\* widowed/separated/divorced

**Table 4.3 Comparison of occupational status**

		<b>Surveillance data</b>			Total
		Unemployed	Employed	Unknown	
<b>Clinic data</b>	Unemployed	9	2	9	20
	Student	9	1	5	15
	Massage (m/p)	1	0	0	1
	Home duties	0	0	1	1
	Professionals	1	2	33	36
	Para-profs.	0	4	7	11
	Office work	0	13	2	15
	Manual	2	15	6	23
	Other	2	2	1	5
<b>Total</b>		24	39	64	127

**Table 4.4 Comparison of ethnicity**

		<b>Clinic data</b>				Total
		Aboriginal	Asian	Caucasian	Other	
<b>Surveillance data</b>	Aboriginal	1	0	0	0	1
	Asian	0	2	0	0	2
	Caucasian	0	0	58	0	58
	African	0	0	0	4	4
	Unknown	0	2	57	3	62
<b>Total</b>		1	4	115	7	127

## Discussion

This study was a retrospective review of data maintained by STD Services in South Australia. The databases comprised the clinical database of Clinic 275 and the surveillance database of STD Services. Patients who presented at Clinic 275 during 1988 to 2000 and were diagnosed for the first time as HIV antibody positive were taken as study subjects.

A total of 127 individuals have been diagnosed at Clinic 275 with HIV infection. Of these, 95% consisted of males. It should be noted that up to the end of 2000, 91% of all HIV cases in South Australia and 95% of all HIV cases in Australia were also males<sup>2,5</sup>.

The majority of the study sample (84%) were in the 20-49 year age group. In the risk factor analysis, being in the 35-39 age group was a significant associate for HIV infection.

Only 11% of the sample was either married or in a de facto relationship. However, being 'single' did not emerge as a significant association with HIV infection.

Caucasians made up 91% of the study subjects. Low numbers of the non-Caucasians in the study sample may represent the demographic structure of South Australia, as 95% of the South Australian population is Caucasian<sup>6</sup>. This may also reflect health seeking behaviour of different ethnic groups. Being non-Caucasian emerged as a significant risk factor for HIV infection in the multivariate analysis. It should be noted that according to the definition of this variable, Caucasian indicates individuals with a European origin rather than its anthropological definition<sup>7</sup>.

Of the study sample, 85% had a history of homosexual exposure. This is in agreement with data from both South Australia and the whole of Australia which indicate that the HIV epidemic is predominantly confined to men who have sex with other men<sup>2,5</sup>. A similar scenario has been seen in other industrialised countries<sup>1</sup>. A history of having a homosexual or bisexual exposure emerged as the strongest risk factor for HIV infection in this study.

A past history of STD had a significant association with HIV infection in this study. Although having an STD greatly facilitates the acquisition of HIV, the association seen in this study could be a reflection of unsafe sexual behaviour in these individuals.

The comparative study used information available in both databases regarding the same individuals in the study sample in order to check the validity of the information. However, few variables were common to both databases and hence comparable to each other. These variables included gender, marital status, occupational status and ethnicity of the study subjects.

While information available in the clinic database had been collected directly from the patients, that of the surveillance database were from the notifying source. For these cases, the notifying source was Clinic 275 as only cases diagnosed at this facility were selected.

As expected, the gender of the cases was similar in both databases. However, different classifications were found for marital status, occupational status and ethnicity. In over 50% of cases, these three variables were designated 'unknown' in the surveillance database. However, all the 'unknown' cases were diagnosed before the year 1993. It should be noted that HIV infection became notifiable in South Australia in 1991<sup>8</sup>. Data about HIV cases in the surveillance database prior to this date were based only on laboratory notification.

Minor differences in classification were found for these three variables, however most were due to different classification systems for the same variables in the two databases.

This study has the limitation of analysing secondary data. However, patients' records are routinely checked and regular validity checks are performed for data in both databases. Since this study looked at data for HIV positive individuals diagnosed over 12 years, analysis of the database information was suitable in terms of practicability and feasibility.

Comparison of data held by STD services for clinical and surveillance purposes showed only minor discrepancies. Comparable variables and coding systems would make the data more suitable for similar comparisons in future.

In conclusion, this study reconfirmed that men in young age groups and men who have sex with other men are more at risk of getting HIV infection. Therefore, emphasis and resources should be directed to these target groups.

### **Acknowledgement**

The author wishes to thank Dr Russell Waddell, Ms Tess Davey, Mrs Joy Copland and other staff at the STD Services who supported this study.

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K.A.M. Ariyaratne  
Visiting Fellow, Postgraduate Institute of Medicine  
University of Colombo, Sri Lanka  
December 2001.

# HIV INFECTION IN SOUTH AUSTRALIA

## HIV Infection 1985 - 31/12/01

In South Australia, 807 individuals have been diagnosed with HIV infection, 732 (91%) males and 75 (9%) females. Of the males, 560 (71%) reported male-to-male sexual contact, 59 (8%) reported injecting drug use and 30 (4%) reported both risk factors. Heterosexual transmission was reported by 44 (59%) females diagnosed with HIV infection, and 25 (33%) females reported injecting drug use (Table 1.1).

## HIV Infection 01/10/01 - 31/12/01

Fifteen individuals (12 male, 3 female) were diagnosed with HIV infection during the fourth quarter (Table 1.2). All the men reported male-to-male sexual contact as their risk factor. Of the three females notified, one was from a country where there is a high prevalence of HIV infection.

Three males were likely to have acquired their infection in the preceding 12 months (Table 1.3).

## Laboratory Screening For HIV Infection 01/10/01 - 31/12/01

During the fourth quarter of 2001, 18,752 tests were performed, 8,058 (43%) on males, 10,638 (57%) on females and 56 tests on individuals whose sex was unknown (Table 1.4).

**Table 1.1 HIV infection detected in South Australia, 1985 - 31/12/2001.  
Exposure category by sex.**

Exposure category	Male		Female		Total	
	No.	%	No.	%	No.	%
Homosexual contact	560	77	n.a		560	69
Homosexual contact/IDU	30	4	n.a		30	4
Heterosexual contact	46	6	44	59	90	11
IDU	57	8	25	33	82	10
Blood products	7	1	2	3	9	1
Other	4	1	3	4	7	1
Unknown	28	3	1	1	29	4
<b>Total</b>	<b>732</b>		<b>75</b>		<b>807</b>	

n.a. not applicable

**Table 1.2 HIV infection detected in South Australia, 01/10/01 - 31/12/01 and year. Exposure category by sex.**

Exposure category	4th Quarter		Year	
	01/10/01 - 31/12/01		01/01/01 - 31/12/01	
	Male	Female	Male	Female
Homosexual	12	n.a	29	n.a
Heterosexual/IDU	-	1	2	2
Heterosexual contact	-	2	4	8
<b>Total</b>	12	3	35	10

n.a. not applicable

**Table 1.3 HIV infection detected in South Australia, 01/10/01 - 31/12/01 and year. Testing history by age group at diagnosis.**

Testing history	4th Quarter			Year		
	01/10/01 - 31/12/01			01/01/01 - 31/12/01		
	Age group (years)			Age group (years)		
	<25	25 - 39	>39	<25	25 - 39	>39
Negative £12 months	3	-	-	3	#5	3
Negative > 12 = 24 months	-	2	-	-	3	-
Negative > 24 months	-	1	2	1	#3	2
No previous test	#2	1	*4	#2	*12	*8
Known positive overseas	-	-	-	-	3	-
<b>Total</b>	5	4	6	6	26	13

\*includes females

#includes 1 female

**Table 1.4 Summary of HIV antibody tests, 01/10/01 - 31/12/01 and year. Laboratory by sex.**

Laboratory	4th Quarter			Year			Total
	01/10/01 - 31/12/01			01/01/01 - 31/12/01			
	Male	Female	Unknown	Male	Female	Unknown	
Public	4729	5840	49	18507	23527	382	42416
Private	3329	4798	7	14657	20127	19	34803
<b>Total</b>	8058	10638	56	33164	43654	401	77219

# HEPATITIS C SURVEILLANCE IN SOUTH AUSTRALIA

## Hepatitis C Medical Notification 01/10/01 - 31/12/01

In the fourth quarter of 2001, medical notifications of hepatitis C infection were received for 222 individuals, 134 (60%) males and 88 (40%) females. This is fewer than the number of notifications recorded in the previous two quarters.

Among the notifications, 35 cases were reported as having an earlier positive test (pre-1995) whilst 77 individuals had never been tested before for hepatitis C infection. In a further 58 cases the testing history was unknown. Of 52 individuals with a previous negative test, 33 were tested more than 12 months earlier and 19 were tested within the last year. In 129 (69%) instances, past or present injecting drug use was reported as a likely transmission route for hepatitis C virus in newly diagnosed infections (Table 2.1).

At the time of diagnosis, the majority of cases (83%) were aged between 20 and 49 years, (101 males, 54 females) (Table 2.2). Of seven males and six females aged less than twenty years (13 cases), ten 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 hepatitis not ascribed to other causes.

Twenty-two incident cases were identified during the quarter, 19 had negative serology in the preceding 12 months and three were clinical diagnoses. The incident cases comprised eleven males and eleven females. In 19 cases the likely mode of transmission for hepatitis C virus was injecting drug use. Occupational exposure accounted for one case, and another was reported as perinatal transmission of hepatitis C virus. One further case resulted from the receipt of tissue in a life-saving procedure (Table 2.3).

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 01/10/01 - 31/12/01 and year. Exposure category by sex.**

Exposure category	4th Quarter		Year		
	01/10/01 - 31/12/01		01/01/01 - 31/12/01		Total
	Male	Female	Male	Female	
IDU <sup>1</sup>	85	44	442	214	656
Blood/tissue products	5	9	24	28	52
Tattoos	8	2	32	12	44
High prevalence country <sup>2</sup>	7	8	36	27	63
Other <sup>3</sup>	2	2	14	18	32
Unknown	9	6	45	24	69
<b>Total</b>	<b>116</b>	<b>71</b>	<b>593</b>	<b>323</b>	<b>916</b>

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

<sup>2</sup> Residence/medical treatment in a high prevalence overseas country.

<sup>3</sup> Includes occupational exposure; household, perinatal & sexual transmission; body piercing/ acupuncture.

**Table 2.2 Hepatitis C infection, new diagnoses 01/10/01 - 31/12/01 and year. Age group by sex.**

Age group (years)	4th Quarter		Year		
	01/10/01 - 31/12/01		01/01/01 - 31/12/01		
	Male	Female	Male	Female	Total
<10	1	-	1	-	1
10 - 19	6	6	17	32	49
20 - 29	31	23	181	107	288
30 - 39	35	19	185	84	269
40 - 49	35	12	158	61	219
≥ 50	8	11	51	39	90
<b>Total</b>	<b>116</b>	<b>71</b>	<b>593</b>	<b>323</b>	<b>916</b>

**Table 2.3 Newly acquired infections (Incident cases\*) of hepatitis C infection, 01/10/01 - 31/12/01 and year. Exposure category by sex.**

Exposure category	4th Quarter		Year		
	01/10/01 - 31/12/01		01/01/01 - 31/12/01		
	Male	Female	Male	Female	Total
IDU	9	10	48	32	80
IDU/tattoos	-	-	-	1	1
Occupational exposure	1	-	2	-	2
Other	1	1	1	2	3
Not identified		-	-	2	2
<b>Total</b>	<b>11</b>	<b>11</b>	<b>51</b>	<b>37</b>	<b>88</b>

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

**Table 2.4 Newly acquired infections (Incident cases\*) of hepatitis C infection, 01/10/01 - 31/12/01 and year. Age group by sex.**

Age group (years)	4th Quarter		Year		
	01/10/01 - 31/12/01		01/01/01 - 31/12/01		
	Male	Female	Male	Female	Total
<20	3	2	7	8	15
20 - 29	3	3	28	18	46
30 - 39	2	5	12	10	22
≥ 40	3	1	4	1	5
<b>Total</b>	<b>11</b>	<b>11</b>	<b>51</b>	<b>37</b>	<b>88</b>

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

**Table 2.5 Summary of laboratory tests for hepatitis C antibodies, 01/10/01 - 31/12/01 and year. Laboratory by sex.**

Laboratory	4th Quarter 01/10/01 - 31/12/01			Year 01/01/01 - 31/12/01			Total
	Male	Female	Unknown	Male	Female	Unknown	
Public	5446	6216	26	21728	24245	149	46122
Private	3303	3617	-	14705	15358	-	30063
<b>Total</b>	8749	9833	26	36433	39603	149	76185

# HEPATITIS B SURVEILLANCE IN SOUTH AUSTRALIA

## Hepatitis B Medical Notification 01/10/01 - 31/12/01

During the fourth quarter of 2001, 73 hepatitis B medical notifications were received. Of these, five were acute clinical cases of hepatitis B infection (Tables 3.1, 3.2). A further 12 were reports of chronic carriers of greater than twelve months duration, who had been previously diagnosed, but not notified (Table 3.3). Reports of antigen positivity of uncertain duration accounted for 55 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 heterosexual contact (1), homosexual contact (2), injecting drug use (1) and unknown risk factors (1) (Table 3.1).

Of the 55 reports of antigen positivity of uncertain duration, 33 tested surface antigen positive for the first time this quarter and the testing history was unknown for the remaining 22 cases. Among the individuals who tested surface antigen positive for the first time, but were not acute cases, the racial origin of 23 (70%) 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, 01/10/01 - 31/12/01 and year.  
Exposure category by sex.**

Exposure category	4th Quarter		Year		
	01/10/01 - 31/12/01		01/01/01 - 31/12/01		
	Male	Female	Male	Female	Total
IDU	1	-	3	-	3
Heterosexual contact	-	1	1	6	7
Overseas travel	-	-	1	-	1
Homosexual contact	2	n.a.	2	n.a.	2
None identified	-	1	1	5	6
<b>Total</b>	<b>3</b>	<b>2</b>	<b>8</b>	<b>11</b>	<b>19</b>

n.a. not applicable

**Table 3.2 Acute hepatitis B infection, 01/10/01 - 31/12/01 and year.  
Age group by sex.**

Age group (years)	4th Quarter		Year		
	01/10/01 - 31/12/01		01/01/01 - 31/12/01		
	Male	Female	Male	Female	Total
10 – 19	-	-	1	4	5
20 – 29	1	2	1	5	6
30 – 39	1	-	3	-	3
40 – 49	-	-	1	-	1
≥ 50	1	-	2	2	4
<b>Total</b>	<b>3</b>	<b>2</b>	<b>8</b>	<b>11</b>	<b>19</b>

**Table 3.3 Hepatitis B infection, 01/10/01 - 31/12/01 and year.  
Case category by sex.**

Case category	4th Quarter		Year		
	01/10/01 - 31/12/01		01/01/01 - 31/12/01		
	Male	Female	Male	Female	Total
Acute infection	3	2	8	11	19
Antigen positive - <12months duration	-	1	2	2	4
Antigen positive - uncertain duration	35	20	146	81	227
Chronic carriers - >12 months duration	9	3	41	25	66
<b>Total</b>	47	26	197	119	316

**Table 3.4 Individuals who tested hepatitis B surface antigen positive for the first time, 01/10/01 - 31/12/01 and year. Race by sex.**

Racial origin	4th Quarter		Year		
	01/10/01 - 31/12/01		01/01/01 - 31/12/01		
	Male	Female	Male	Female	Total
Aboriginal	-	-	12	-	12
Asian	15	8	52	35	87
Caucasian	5	1	21	8	29
Other/unknown	3	1	6	5	11
<b>Total</b>	23	10	91	48	139

**Table 3.5 Summary of hepatitis B surface antigen tests, 01/10/01 - 31/12/01 and year. Laboratory by sex.**

Laboratory	4th Quarter			Year			Total
	01/10/01 - 31/12/01			01/01/01 - 31/12/01			
	Male	Female	Unknown	Male	Female	Unknown	
Public	4827	6645	28	18487	27087	151	45725
Private	2405	3973	-	11757	18054	-	29811
<b>Total</b>	7232	10618	28	30244	45141	151	75536

## GENITAL CHLAMYDIAL INFECTION IN SOUTH AUSTRALIA

### Genital chlamydial Infection 01/10/01 - 31/12/01

Between 1 October and 31 December 2001, STD Services received 372 notifications of genital chlamydial infection. This compares with a range of 199 to 271 cases for the same period in the years 1996 to 2000. Greater than expected numbers were received from Clinic 275 as well as metropolitan medical practitioners for each quarter in 2001.

In the fourth quarter, 142 (38%) cases occurred in males and 230 (62%) in females (Table 4.1). Seventy five percent of cases in males occurred in men aged less than 30 years, whilst in females, women aged less than 30 years accounted for 85% of cases. Incidence peaked in the age group 20 to 24 years for both sexes (37% males, 35% females) (Table 4.1).

In the majority of cases, the racial origin was reported as Caucasian (84%) and the infection was acquired in South Australia (92%) (Table 4.2). Data for this quarter on age group, racial origin and the likely location of disease acquisition is consistent with data for the years 1996 to 2000. Nine males (6%) with urethral chlamydial infection reported male-to-male sex.

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, 01/10/01 - 31/12/01 and year. Age group by sex.**

Age group (years)	4th Quarter 01/10/01 - 31/12/01		Year 01/01/01 - 31/12/01		
	Male	Female	Male	Female	Total
< 20	20	80	85	298	383
20 - 24	53	80	231	331	562
25 - 29	34	37	126	138	264
30 - 34	23	18	77	57	134
35 - 39	6	9	32	24	56
≥ 40	6	6	38	17	55
<b>Total</b>	142	230	589	865	1454

**Table 4.2 Genital chlamydial infection, 01/10/01 - 31/12/01 and year.  
Race by sex.**

Racial origin	4th Quarter		Year		
	01/10/01 - 31/12/01		01/01/01 - 31/12/01		
	Male	Female	Male	Female	Total
Aboriginal	6	17	49	86	135
Asian	4	10	26	51	77
Caucasian	124	187	489	696	1185
Other/unknown	8	16	25	32	57
<b>Total</b>	<b>142</b>	<b>230</b>	<b>589</b>	<b>865</b>	<b>1454</b>

**Table 4.3 Summary of laboratory tests for genital chlamydia,  
01/10/01 - 31/12/01 and year. Laboratory by sex.**

Laboratory	4th Quarter		Year		
	01/10/01 - 31/12/01		01/01/01 - 31/12/01		
	Male	Female	Male	Female	Total
Public	1512	3270	5872	13791	19663
Private	755	2108	3020	8703	11723
<b>Total</b>	<b>2267</b>	<b>5378</b>	<b>8892</b>	<b>22494</b>	<b>31386</b>

# GONOCOCCAL INFECTION IN SOUTH AUSTRALIA

## Gonococcal Infection 01/10/01 - 31/12/01

Between 1 October and 31 December 2001, STD Services received 40 notifications of gonococcal infection (Table 5.1). This compares with a range of 46 to 87 infections in the earlier quarters of 2001.

Twenty-nine cases (72%) occurred in males, and 11 (28%) in females (Table 5.1). Although gonococcal infection in males occurred across a wide age range, 20 cases (69%) occurred in males of less than 30 years of age; five cases (17%) were reported in men aged 40 years and over. In females, eight of the 11 cases occurred in women aged less than 25 years (Table 5.1).

Although racial origin was recorded as Aboriginal for four cases in women, racial origin was not reported in the other five female cases. Among males, seven cases (24%) were Aboriginal and 16 (55%) were Caucasian. The proportion of males with gonococcal infection reporting male-to-male sexual contact was 27%.

The likely location of acquiring infection is known for 31 cases. Of these, 27 cases (87%) acquired infection in South Australia, with two cases being infected whilst interstate and two overseas.

**Table 5.1 Gonococcal infection detected in South Australia, 01/10/01 - 31/12/01 and year. Age group by sex.**

Age group (years)	4th Quarter		Year		
	01/10/01 - 31/12/01		01/01/01 - 31/12/01		Total
	Male	Female	Male	Female	
< 20	5	6	20	29	49
20 - 24	8	2	31	19	50
25 - 29	7	2	27	17	44
30 - 34	1	1	23	10	33
35 - 39	3	-	20	6	26
≥ 40	5	-	19	4	23
<b>Total</b>	29	11	140	85	225

# CLINIC 275 ACTIVITY REPORT

Table 6.1 Clinic 275 - Summary Statistics

Diagnosis	Quarter		Year		
	01/10/01 - 31/12/01		01/01/01- 31/12/01		
	Male	Female	Male	Female	Total
No illness	456	348	1797	1388	3185
HIV	3	-	10	1	11
Gonorrhoea	5	-	37	6	43
Syphilis	-	1	3	4	7
Herpes	13	18	79	80	159
Chlamydia	50	37	213	135	348
NSU	18	n.a.	97	n.a.	97
Warts	209	111	745	378	1123
Trichomoniasis	-	1	-	8	8
Candida vaginitis	n.a.	75	n.a.	319	322
Crabs	19	1	65	13	78
Scabies	2	-	5	-	5
Molluscum	52	13	150	55	205
Bacterial vaginosis	n.a.	51	n.a.	205	205
Hepatitis B antigen positive			18	17	35
Acute	2	-	2	1	3
Carrier	4	5	16	16	32
Hepatitis C infection - Incident	4	1	11	2	13
New	-	1	10	3	13
Known	18	7	64	41	105
Urethral irritation	66	n.a.	189	n.a.	189
Balanitis	46	n.a.	174	n.a.	174
Non STD illness	136	47	413	194	607
Post coital contraception	n.a.	100	n.a.	280	280
Abnormal Pap smear	n.a.	19	n.a.	129	129
Other/Uncertain	19	29	83	90	173
Clinic attendances	2044	1498	5554	7752	13296
Episodes of care	1029	770	3885	2951	6836
Individual clients	976	719	3041	2259	5300

n.a. 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 attendance's were obtained from the daybook for the time period covered by this report.

**Table 6.2 Males diagnosed with chlamydia, gonorrhoea or syphilis\* at C275, 01/10/01 - 31/12/01. Exposure category by infection.**

Exposure category	No.	Chlamydia	Gonorrhoea
Homosexual	158	8	3
Bisexual	43	2	-
Heterosexual IDU	94	4	1
Heterosexual, O/S <sup>#</sup>	86	6	-
Heterosexual	583	30	1
<b>Total</b>		50	5

\* No case of syphilis diagnosed during quarter

# Overseas contact in the previous three months.

**Table 6.3 Males diagnosed with hepatitis C, hepatitis B or HIV infection at C275, 01/10/01 - 31/12/01. Exposure category by infection.**

Exposure category	No.	Hepatitis C		Acute	Hepatitis B		HIV
		Known	Incident		Previous exposure*	Carrier	
Homosexual	158	-	-	1	8	1	3
Homosexual, IDU	20	1	1	-	1	-	-
Bisexual	43	-	-	-	2	1	-
Bisexual, IDU	6	2	1	-	-	-	-
Heterosexual, IDU	94	15	1	-	7	-	-
Heterosexual, O/S <sup>#</sup>	86	-	-	1	2	1	-
Heterosexual	583	2	1	-	8	1	-
Other/unknown	39	1	-	-	4	-	-
<b>Total</b>		21	4	2	32	4	3

\* Previous exposure to hepatitis B refers to previous infection and now surface antibody positive.

# Overseas contact in the previous three months.

**Table 6.4 Females diagnosed with chlamydia, gonorrhoea\* or syphilis at C275, 01/10/01 - 31/12/01. Exposure category by infection.**

Exposure category	No.	Chlamydia	Syphilis
Heterosexual, IDU	70	3	-
Heterosexual, O/S <sup>#</sup>	63	5	-
Heterosexual	549	27	1
Sex worker	22	1	-
Other/unknown	57	1	-
<b>Total</b>		37	1

\* No case of gonorrhoea diagnosed during quarter

# Overseas contact in the previous three months.

**Table 6.5 Females diagnosed with hepatitis C, hepatitis B\* or HIV\*infection at C275, 01/10/01 - 31/12/01. Exposure category by infection.**

Exposure category	Hepatitis C			Hepatitis B		
	No.	New diagnoses		Known	Previous exposure**	Carrier
		Prevalent	Incident			
Heterosexual, IDU	70	1	-	6	6	1
Heterosexual, O/S #	63	-	-	-	-	1
Heterosexual	549	-	1	2	2	3
Sex worker, IDU	9	-	-	1	1	-
<b>Total</b>		1	1	9	9	5

\* No case of HIV or acute hepatitis B diagnosed during the quarter

\*\* Previous exposure to hepatitis B refers to previous infection and now surface antibody positive.

# Overseas contact in the previous three months.

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Postal address STD Services  
275 North Terrace  
ADELAIDE SA 5000

Editor  
Contributors

Mrs Joy Copland  
Dr Gavin Hart  
Dr Russell Waddell  
Mrs Joy Copland  
Ms Monica Winter  
Ms Brenda McIlvar

Tel: 08 8226 6025  
Fax: 08 8226 6560  
email: Joy.Copland@dhs.sa.gov.au

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