

UNIVERSITY
of
OTAGO



Te Whare Wānanga o Otago

CONFIDENTIAL

**ONE HUNDREDTH QUARTERLY REPORT
OF THE AIDS EPIDEMIOLOGY GROUP TO THE
MINISTRY OF HEALTH**

12 March 2014

This is the 100th of its Quarterly Reports the AIDS Epidemiology Group marking 25 years of HIV/AIDS surveillance. The Group would like to acknowledge this could not have been achieved without the help of clinicians and others who have consistently provided high quality information.

SUMMARY AND CONCLUSIONS

The AIDS Epidemiology Group received four notifications of people with AIDS during the fourth quarter of 2013.

All of those notified with AIDS during this quarter were males. Three men were reported to have been infected through sex with other men, with the mode of infection yet to be confirmed for the other man.

Of the four AIDS notification during the quarter, all were diagnosed in 2013. All four men had an HIV diagnosis within three months of their AIDS diagnosis, thereby, classified as clinically late diagnoses.

There have been 1133 people notified with AIDS in New Zealand by the 31st December 2013.

The Group has been informed of 35 people found to be infected with HIV through antibody testing during the fourth quarter of 2013, of which 30 were males, one was a transgender person and four were females. Detailed information has so far been received on 26.

Of these 26, 21 were men who were reported to have been infected through sex with other men and one was a transgender person with the mode of infection classified as other. Four people were reported to have been infected heterosexually (two men and two women).

Of the 21 men infected through sex with other men, 13 were thought to have been infected in New Zealand, seven overseas and for one person, the place of infection was unknown. Of the 13 men infected in New Zealand, 10 had a previous negative antibody test, seven of which were in the last two years.

Of the four people infected heterosexually, all four (two men and two women) were thought to have been infected in New Zealand. Of the four people infected heterosexually, three were of New Zealand European ethnicity and one was Maori. The risk status of partners was unknown for all four people.

In this quarter, 22 people were reported by the laboratories as having first viral load testing in New Zealand. Of the 22 people, information on 15 people has been reported to the AEG. Of the 15, four were diagnosed overseas and 11 in New Zealand. Of these 15, 10 were males and five females. Of these 15, eight were infected by men having sex with men, and seven through heterosexual contact.

To the end of December 2013, a total of 3952 people had been diagnosed with HIV in New Zealand. This number includes 618 people found to be infected through the reporting of viral load testing who were not known to have had an antibody test. The total will most likely include some duplicates because codes are not available for all reports.

From the beginning of 2013 information has been collected on whether individuals had a rapid ('point of care') HIV test before the confirmatory Western blot, this information is shown in (Table 9). In the fourth quarter of 2013, five people reported 'Community Organisation Testing Clinics' as the place of testing site.

Section 1 of this report shows the activities of the AIDS Epidemiology Group. Section 2 gives a breakdown of people notified with AIDS. Section 3 reports on people diagnosed with HIV through antibody testing and reported through viral load testing. Section 4 reports surveillance findings of births to known HIV-infected pregnant women, children infected through mother-to-child transmission and pregnant women diagnosed with HIV. Section 5 gives a summary of HIV reported through antibody testing and viral load.

SECTION 1: ACTIVITIES OF THE AIDS EPIDEMIOLOGY GROUP

The AIDS Epidemiology Group has continued to respond to requests for specific information and analyses of data from various organisations, individuals and the media.

A/Prof Nigel Dickson and Dr Peter Saxton were members of a group that reviewed the New Zealand Blood Service Donor Deferral Criteria. The group was chaired by Professor Charlotte Paul, and reported to the New Zealand Blood Service in February 2014.

A paper by Dr Peter Saxton, A/Prof Nigel Dickson and Mr. Tony Hughes has been accepted for publication by the Sexually Transmitted Infections Journal:

Saxton PJ, Dickson NP, Hughes AJ. Location-based HIV behavioural surveillance among MSM in Auckland, New Zealand 2002–2011: condom use stable and more HIV testing. *Sex Transm Infect* 2014, 90:133-138. *Sex Transm Infect* 2014; 90:133-138 doi:10.1136/sextrans-2013-051160

SECTION 2: AIDS IN NEW ZEALAND

2.1 NUMBER OF PEOPLE WITH AIDS IN NEW ZEALAND

The AIDS Epidemiology Group received four notifications of people with AIDS during the fourth quarter of 2013. All of those notified with AIDS during this quarter were males. Three men were reported to have been infected through sex with other men, with the mode of infection yet to be confirmed for one man. There have been 1133 people notified with AIDS in New Zealand by the 31st December 2013.

Table 1 shows the number of people notified, and diagnosed, annually with AIDS in New Zealand, and the number of people with AIDS known to have died. The numbers of people diagnosed in 2013, and possibly earlier, may increase due to delayed notifications. As some of the delayed notifications have been made because of initiatives taken by the AIDS Epidemiology Group, it is not possible to predict the future pattern of delayed notifications. Table 2 shows the number of people by year of diagnosis and mode of infection.

Table 1 Numbers of people notified and diagnosed with AIDS in each year

Year	Notified	Diagnosed	Deaths
1983	0	5	0
1984	3	4	3
1985	11	12	5
1986	19	16	11
1987	28	30	14
1988	38	44	24
1989	59	71	52
1990	72	71	60
1991	78	69	52
1992	50	63	66
1993	70	54	55
1994	44	47	45
1995	49	65	51
1996	76	63	33
1997	42	37	33
1998	29	29	19
1999	33	38	18
2000	25	26	19
2001	26	30	14
2002	17	20	11
2003	33	36	10
2004	38	43	14
2005	49	37	15
2006	29	27	15
2007	31	28	11
2008	48	37	8
2009	28	23	8
2010	39	32	15
2011	24	22	5
2012	20	21	8
2013*	25	15	6
Unknown	0	18	9
Total	1133	1133	709

*The numbers of people diagnosed and the number of deaths in 2013 (and possibly earlier) may increase due to delayed notifications.

Table 2 Numbers of people with AIDS by year of diagnosis and main mode of infection

Year of diagnosis	Homosexual contact [¶]	Heterosexual contact		IDU [§]	Other*	Unknown	Total
		Men	Women				
1983	5	0	0	0	0	0	5
1984	4	0	0	0	0	0	4
1985	12	0	0	0	0	0	12
1986	11	0	1	0	2	2	16
1987	27	0	0	0	2	1	30
1988	42	0	0	1	0	1	44
1989	59	3	2	1	3	3	71
1990	63	4	0	2	1	1	71
1991	58	3	2	2	0	4	69
1992	51	3	5	2	1	1	63
1993	44	1	3	1	2	3	54
1994	40	2	1	3	1	0	47
1995	48	5	2	0	3	7	65
1996	44	7	3	3	2	4	63
1997	27	4	1	1	4	0	37
1998	15	5	3	2	1	3	29
1999	24	5	6	1	2	0	38
2000	15	5	2	0	4	0	26
2001	11	6	9	0	2	2	30
2002	8	6	3	1	2	0	20
2003	18	8	5	0	3	2	36
2004	17	11	10	1	3	1	43
2005	17	8	7	0	2	3	37
2006	12	7	8	0	0	0	27
2007	13	6	5	0	3	1	28
2008	19	12	3	0	1	2	37
2009	12	4	5	1	0	1	23
2010	20	6	3	0	0	3	32
2011	12	4	3	1	0	2	22
2012	9	4	5	0	0	3	21
2013**	11	0	3	0	0	1	15
Unknown	13	0	3	2	0	0	18
Total	781	129	103	25	44	51	1133

¶ Includes men who also reported injecting drugs

§ Injecting drug user

* Other includes transfusion and blood product recipients, perinatal cases, and people reported as transgender.

** The numbers of people diagnosed in 2013 (and possibly earlier) will increase due to delayed notification.

2.2 CHARACTERISTICS OF PEOPLE NOTIFIED WITH AIDS

All of those notified with AIDS during this quarter were males. Three men were reported to have been infected through sex with other men, with the mode of infection yet to be confirmed for one man.

The sex, age, ethnicity and mode of infection of people notified with AIDS, by time of notification, are shown in Table 3.

Table 3 Characteristics of people notified with AIDS, by time of notification

Characteristics		Quarter to 31.12.13		Twelve months to 31.12.13		Total to 31.12.13	
		N	%	N	%	N	%
Sex	Male	4	100.0	19	76.0	1001	88.3
	Female	0	0.0	6	24.0	129	11.4
	Transgender	0	0.0	0	0.0	3	0.3
Age at time of diagnosis	0-4	0	0.0	0	0.0	12	1.1
	5-14	0	0.0	0	0.0	10	0.9
	15-19	0	0.0	0	0.0	4	0.4
	20-29	1	25.0	4	16.0	167	14.7
	30-39	0	0.0	1	4.0	413	36.5
	40-49	1	25.0	8	32.0	335	29.6
	50-59	1	25.0	6	24.0	135	11.9
	≥60	1	25.0	6	24.0	54	4.8
	Unknown	0	0.0	0	0.0	3	0.3
Ethnic Group	European	3	75.0	13	52.0	763	67.3
	Māori*	0	0.0	4	16.0	136	12.0
	Pacific Island	0	0.0	1	4.0	38	3.4
	Other	1	25.0	6	24.0	188	16.6
	Unknown	0	0.0	1	4.0	8	0.7
Mode of infection	Homosexual contact	3	75.0	12	48.0	764	67.4
	Homosexual & IDU	0	0.0	1	4.0	15	1.3
	Injecting drug user	0	0.0	0	0.0	25	2.2
	Haemophilia	0	0.0	0	0.0	16	1.4
	Transfusion related	0	0.0	0	0.0	5	0.4
	Heterosexual contact	0	0.0	9	36.0	232	20.5
	Perinatal	0	0.0	0	0.0	18	1.6
	Other	0	0.0	0	0.0	5	0.4
	Unknown	1	25.0	3	12.0	53	4.7
TOTAL		4		25		1133	

* Includes people classified as Māori and another ethnic group

2.3 CLINICAL INDICATORS

Table 4 shows the clinical indicator diagnoses for people notified with AIDS. Since November 2005 this table has separated out those who have tuberculosis that was previously included under opportunistic infections.

Table 4 Clinical indicator diagnosis of people notified with AIDS, by time of notification

	Quarter to 31.12.13		Twelve months to 31.12.13		Total to 31.12.13	
	N	%	N	%	N	%
Opportunistic infection	4	100.0	21	84.0	713	63.0
Opp. Infection and other	0	0.0	0	0.0	50	4.4
Kaposi's sarcoma (KS)	0	0.0	2	8.0	63	5.6
Opp. Infection and KS	0	0.0	0	0.0	28	2.5
Tuberculosis	0	0.0	0	0.0	83	7.3
Tuberculosis and other	0	0.0	0	0.0	17	1.5
HIV encephalopathy	0	0.0	1	4.0	42	3.7
HIV wasting syndrome	0	0.0	0	0.0	66	5.8
Lymphoma	0	0.0	1	4.0	49	4.3
Other	0	0.0	0	0.0	22	1.9
TOTAL	4		25		1133	

2.4 GEOGRAPHIC DISTRIBUTION

Table 5 shows the numbers and rates of AIDS notifications according to the health region of notification. The table is presented with columns for the quarter and 12 months as in previous tables but the total is divided into four brackets with the rates derived from the population in the nearest census population for District Health Board areas: 1984-1993 based on the 1991 census, 1994-1998 based on the 1996 census, 1999-2003 based on the 2001 census, and 2004-2012 based on the 2006 census.

Table 5 Regional distribution of people notified with AIDS by time of notification, and rates per 100,000

Health Region*	Quarter to 31.12.13	Twelve months to 31.12.13	1984-1993		1994-1998		1999-2003		2004-2012	
			No.	per 100,000	No.	per 100,000	No.	per 100,000	No.	per 100,000
Northern	2	13	236	21.8	133	10.9	88	6.7	176	11.7
<i>Auckland</i>	2	11	228	23.8	132	12.2	86	7.3	170	12.5
Midland	0	1	45	7.8	20	3.2	13	2.0	30	4.2
Central	2	8	110	12.8	57	6.4	20	2.3	37	3.8
<i>Wellington</i>	2	5	89	25.1	44	11.9	19	5.0	28	5.8
Southern	0	3	37	4.3	30	3.3	13	1.4	63	6.2
TOTAL	4	25	428	12.7	240	6.7	134	3.6	306	7.2

*Health regions are made up of the following District Health Board areas:

Northern: Northland, Waitemata, Auckland, Counties Manukau

Midland: Waikato, Lakes District, Bay of Plenty, Tairāwhiti

Central: Taranaki, Hawkes Bay, MidCentral, Hutt District, Capital and Coast, Wairarapa

Southern: Nelson Marlborough, West Coast, Canterbury, South Canterbury, Otago, Southland

OUTCOME

Table 6 shows the reported outcomes (at the time of this report) of people notified as having AIDS, by year of diagnosis.

The higher proportion of people diagnosed in recent years, who have survived, is likely to be largely a reflection of the shorter length of follow up and, from 1996, the introduction of more effective treatments after the diagnosis of AIDS.

Table 6 Outcome of people notified with AIDS by year of diagnosis of AIDS

Year of diagnosis of AIDS	Believed to be Alive	Known to have died	Lost to follow up (incl. overseas)	Total	% surviving of those of known outcome
Unknown	3	12	3	18	16.7
1983	0	5	0	5	0
1984	0	4	0	4	0
1985	0	11	1	12	0
1986	0	13	3	16	0
1987	0	30	0	30	0
1988	0	43	1	44	0
1989	1	68	2	71	1.4
1990	1	67	3	71	1.4
1991	2	63	4	69	2.9
1992	2	58	3	63	3.2
1993	3	49	2	54	5.6
1994	1	43	3	47	2.1
1995	6	53	6	65	9.2
1996	16	36	11	63	25.4
1997	15	16	6	37	40.5
1998	8	18	3	29	27.6
1999	20	16	2	38	52.6
2000	19	5	2	26	73.1
2001	16	9	5	30	53.3
2002	11	5	4	20	55.0
2003	23	7	6	36	63.9
2004	26	14	3	43	60.5
2005	21	9	7	37	56.8
2006	16	7	4	27	59.3
2007	20	7	1	28	71.4
2008	28	8	1	37	75.7
2009	17	5	0	22	77.3
2010	21	9	2	32	65.6
2011	18	3	1	22	81.8
2012	17	3	0	20	85.0
2013	13	3	1	17	76.5
TOTAL	344	699	90	1133	30.4

SECTION 3: HIV INFECTION

The AIDS Epidemiology Group has since 1989 received information directly from the two laboratories (Institute of Environmental Science and Research Ltd (ESR) and the Virus Laboratory, Auckland Hospital) that perform confirmatory HIV antibody testing using the Western blot method. From June 2008 to June 2010, Auckland Diagnostic Medlab was also performing these and informed the Group of any positive tests. A report of all HIV diagnoses reported through the Western blot antibody test from the three laboratories is provided in Section 3.1.

From the start of 1996, further information has been sought from all clinicians who had requested the testing of people found to be infected with HIV. This process is referred to as “enhanced surveillance of HIV infection”. For this reason, some of the following tables include information only since 1996. To date, 2290 people have been found to be infected with HIV through antibody tests performed in New Zealand since 1996. Detailed information has been received on 84.0 % of these people.

From the beginning of 2002 information has also been received from the four New Zealand laboratories performing viral load tests (Auckland, Waikato, Wellington and Christchurch). This allows increases the chance that all those receiving care in New Zealand with HIV are included on the HIV database. A report of this is provided in Section 3.2.

To the end of December 2013, a total of 3952 people have been reported to be infected with HIV in New Zealand. This number includes 618 people found to be infected through the reporting of viral load testing who were not known to have had an antibody test; this total will include some duplicates because codes are not available for all reports. Table 7 below shows the total number of people reported by the two different reporting systems. Section 5 of this report gives a summary of this.

Table 7 Number of males and females with HIV according to reporting system

Reporting system	Male	Female	Transgender	Sex not stated	Total
Antibody test	2743	561	12	18	3334
Viral Load test	524	93	1	0	618
TOTAL	3267	654	13	18	3952

3.1 HIV INFECTION REPORTED THROUGH THE WESTERN BLOT ANTIBODY TEST

3.1.1 HIV cases reported in this quarter

The Group has been informed of 35 people found to be infected with HIV through antibody testing during the fourth quarter of 2013, of which 30 were males, one was a transgender person and four were females. Detailed information has so far been received on 26.

Of these 26, 21 were men who were reported to have been infected through sex with other men and one was a transgender person with the mode of infection classified as other. Four people were reported to have been infected heterosexually (two men and two women).

Of the 21 men infected through sex with other men, 13 were reported to have been infected in New Zealand, seven overseas and for one person, the place of infection was unknown. Of the 13 men infected in New Zealand, ten had a previous negative antibody test, seven of which were in the last two years.

Of the four people infected heterosexually, all four (two men and two women) were reported to have been infected in New Zealand. Of these four people, three were New Zealand European ethnicity and one was Maori. The risk status of partners was unknown for all four people.

From the beginning of 2013 information has been collected on whether individuals had a rapid ('point of care') HIV test before the confirmatory Western blot, this information is shown in Table 9 under 'Community Organisation Testing Clinics'. In the fourth quarter of 2013, five people reported 'Community Organisation Testing Clinics' as the place of testing site.

About three months after the date of diagnosis of HIV, follow- up letters are sent out by the AEG to all clinician reported to be caring for patients newly diagnosed with HIV as frequently more information is available at this time.

Table 8 Demographic characteristics of people with HIV reported through the Western blot antibody test

Characteristics		Quarter to 31.12.13		Twelve months to 31.12.13		Total to 31.12.13	
		N	%	N	%	N	%
TOTAL		35		130		3334	
Sex	Male	30	85.7	112	86.2	2743	82.3
	Female	4	11.4	17	13.1	561	16.8
	Transgender	1	2.9	1	0.8	12	0.4
	Not Stated	0	0.0	0	0.0	18	0.5
	0-4	0	0.0	0	0.0	34	1.0
Age at time of diagnosis	5-14	0	0.0	0	0.0	31	0.9
	15-19	0	0.0	1	0.8	50	1.5
	20-29	8	22.9	27	20.8	838	25.1
	30-39	12	34.3	45	34.6	1195	35.8
	40-49	5	14.3	31	23.8	717	21.5
	50-59	6	17.1	19	14.6	274	8.2
	≥60	4	11.4	7	5.4	101	3.0
	Not stated	0	0.0	0	0.0	94	2.8
Total 1.1.96 to 31.12.13							
TOTAL		35		130		2290	
Ethnic Group*	European	16	45.7	58	44.6	1046	45.7
	Māori	3	8.6	8	6.2	155	6.8
	Māori & other	0	0.0	1	0.8	13	0.6
	Pacific Island	1	2.9	6	4.6	79	3.4
	African	0	0.0	5	3.8	479	20.9
	Asian	5	14.3	35	26.9	355	15.5
	South American	0	0.0	3	2.3	52	2.3
	Other	0	0.0	1	0.8	50	2.2
	Unknown	10	28.5	13	10.0	61	2.7
<i>Usual residence†</i>	New Zealand	25	71.4	109	83.8	2078	90.7
	<i>Northern</i>	12	48.0	71	65.1	1139	54.8
	<i>Midland</i>	6	24.0	10	9.2	218	10.5
	<i>Central</i>	3	12.0	15	13.8	383	18.4
	<i>Southern</i>	4	16.0	13	11.9	338	16.3
	Overseas	1	2.9	7	5.4	129	5.6
	Unknown	9	25.7	14	10.8	83	3.6

*To ensure consistency with the way in which ethnicity is determined in the census (the source of denominator data) we stipulated that ethnicity should be “as reported by the patient”, and that more than one group could be indicated.

† The place of residence at the time of diagnosis may have been only temporary, particularly for those found to be infected as part of a refugee medical assessment.

Table 9 Other characteristics of people with HIV reported through the Western blot antibody test

		Quarter to 31.12.13		Twelve months to 31.12.13		Total to 31.12.13	
		N	%	N	%	N	%
TOTAL		35		130		3334	
Mode of infection	Homosexual contact	21	60.0	77	59.2	1762	52.8
	Homosexual & IDU	0	0.0	2	1.5	39	1.2
	Injecting drug use (IDU)	0	0.0	1	0.8	70	2.1
	Blood product recipient	0	0.0	0	0.0	29	0.9
	Transfusion recipient	0	0.0	0	0.0	25	0.7
	Heterosexual contact	4	11.4	31	23.8	942	28.3
	Perinatal	0	0.0	0	0.0	53	1.6
	Other	1	2.9	3	2.3	27	0.8
	Unknown	9	25.7	16	12.3	387	11.6
	Total 1.1.96 to 31.12.13						
TOTAL						2290	
Site of testing	General Practice	6	17.1	42	32.3	974	42.5
	Community Organisation Testing Clinics*	5	14.3	16	12.3	133	5.8
	Hospital						
	<i>Specialist Physician</i>	7	20.0	20	15.4	463	20.2
	<i>Sexual Health Clinic</i>	7	20.0	23	17.7	353	15.4
	<i>Other</i>	0	0.0	4	3.1	44	2.0
	Refugee Resettlement Centre	0	0.0	5	3.8	167	7.3
	Prison	0	0.0	2	1.5	10	0.4
	Other	1	2.9	5	3.8	87	3.8
	Unknown	9	25.7	13	10.0	59	2.6
Reasons for HIV testing	History of risk contact/behaviour	9	25.7	43	33.1	564	24.6
	History of risk and symptoms	1	2.9	8	6.2	152	6.6
	Symptoms	7	20.0	19	14.6	567	24.8
	Antenatal Screening	0	0.0	1	0.8	31	1.4
	Other Screening	2	5.7	12	9.2	402	17.6
	Blood donor	0	0.0	0	0.0	16	0.7
	Contact tracing	0	0.0	3	2.3	95	4.1
	Other	7	20.0	30	23.0	360	15.7
	Unknown	9	25.7	14	10.8	103	4.5
	Country/Region of infection	New Zealand	18	51.4	68	52.3	1014
New Zealand or other		0	0.0	1	0.8	20	0.9
Australia		3	8.6	7	5.4	125	5.5
Africa		0	0.0	5	3.8	475	20.7
Asia		2	5.7	19	14.6	283	12.3
Pacific Island		0	0.0	2	1.5	35	1.5
Europe		0	0.0	5	3.8	68	3.0
North America		2	5.7	3	2.3	52	2.3
Latin America		0	0.0	4	3.1	49	2.1
Middle East & North Africa		0	0.0	0	0.0	7	0.3
Caribbean		0	0.0	0	0.0	2	0.1
Unknown but not NZ		0	0.0	1	0.8	26	1.1
Unknown		10	28.6	15	11.5	134	5.9

* Community Organisation Testing Clinics include both NZ AIDS Foundation and Body Positive clinics.

Table 10 Clinical characteristics of people with HIV reported through the Western blot antibody test

Characteristics		Quarter to 31.12.13		Twelve months to 31.12.13		Total 1.1.96 to 31.12.13	
		N	%	N	%	N	%
TOTAL		35		130		2290	
Previous negative test	Yes	17	48.6	56	43.1	802	35.0
	≤2 yrs	11	64.7	31	55.4	454	56.6
	2.1-5 yrs	4	23.5	15	26.8	211	26.3
	>5 yrs	2	11.8	9	16.1	120	15.0
	Time unknown	0	0.0	1	1.8	17	2.1
	No	8	22.9	44	33.8	1160	50.7
	Unknown	10	28.6	30	23.1	319	13.9
Not applicable	0	0.0	0	0.0	9	0.4	
Total 1.1.05* to 31.12.13							
TOTAL		35		130		1362	
First CD4 Count after diagnosis	<200	4	11.4	27	20.8	293	21.5
	200-350	2	5.7	20	15.4	205	15.1
	>350	11	31.4	50	38.5	537	39.4
	Unknown	18	51.4	33	25.3	327	24.0

*Information on the first CD4 count after HIV diagnosis has only been collected since the beginning of 2005

Seventeen people in this quarter had a previous negative antibody test. Sixteen were men infected through sex with man and one was a female infected by heterosexual means.

3.1.2 NUMBER OF PEOPLE DIAGNOSED WITH HIV IN EACH YEAR IN NEW ZEALAND THROUGH THE WESTERN BLOT ANTIBODY TEST

The numbers of people diagnosed with HIV in each year in New Zealand since HIV antibody testing first became available in 1985 are presented, according to sex, in Table 11 and according to major mode of infection in Table 12. These should not be interpreted as the numbers of people annually infected with HIV, as testing may not be requested until many years after infection has occurred. In addition, not all people at risk will have been tested.

Table 11 Number of males and females diagnosed with HIV by year in New Zealand

Year of diagnosis in NZ	Male	Female	Transgender	Sex not stated	Total
1985	60	0	0	1	61
1986	114	5	1	4	124
1987	97	3	0	5	105
1988	93	1	0	0	94
1989	97	6	2	3	108
1990	94	6	1	0	101
1991	90	14	1	0	105
1992	91	8	0	1	100
1993	62	17	1	2	82
1994	69	14	0	1	84
1995	64	14	1	1	80
1996	76	17	0	0	93
1997	47	16	0	0	63
1998	83	20	0	0	103
1999	55	16	0	0	71
2000	59	25	1	0	85
2001	64	31	0	0	95
2002	85	22	0	0	107
2003	124	30	0	0	154
2004	123	34	0	0	157
2005	141	42	0	0	183
2006	124	52	0	0	176
2007	123	33	0	0	156
2008	151	32	1	0	184
2009	117	33	1	0	151
2010	127	21	1	0	149
2011	92	17	0	0	109
2012	109	15	0	0	124
2013	112	17	1	0	130
Total	2743	561	12	18	3334

Table 12 Number of people found to be infected with HIV by year of diagnosis and major category of risk behavior

Year of diagnosis in NZ	Homo - sexual	Homo - sexual + IDU	Heterosexual		IDU	Haemo - philia	Trans - fusion	Peri - natal	Other*	Unk.	Total
			M	F							
1985	33	0	0	0	0	11	0	0	0	17	61
1986	56	0	2	2	1	10	2	0	1	50	124
1987	61	3	2	1	2	4	8	0	0	24	105
1988	77	3	0	0	3	2	1	0	0	8	94
1989	73	2	3	3	4	1	1	1	2	18	108
1990	68	0	2	3	4	0	0	0	1	23	101
1991	74	0	2	10	5	0	0	1	1	12	105
1992	71	1	2	4	6	0	0	0	0	16	100
1993	45	2	6	17	3	0	0	0	1	8	82
1994	50	0	9	8	5	0	0	0	1	11	84
1995	40	1	5	12	1	0	0	4	1	16	80
1996	51	1	13	16	4	0	0	0	3	5	93
1997	26	1	9	16	3	1	1	1	0	5	63
1998	34	0	38	14	0	0	1	2	0	14	103
1999	36	0	12	14	0	0	2	1	0	6	71
2000	29	2	19	21	1	0	1	2	3	7	85
2001	38	0	17	27	2	0	2	3	2	4	95
2002	53	0	17	19	8	0	0	2	0	8	107
2003	72	3	31	26	4	0	1	6	0	11	154
2004	70	5	38	31	2	0	0	6	0	5	157
2005	88	2	36	39	1	0	1	5	2	9	183
2006	69	2	42	46	0	0	0	2	0	15	176
2007	70	3	33	29	1	0	2	7	0	11	156
2008	90	3	39	24	3	0	2	4	3	16	184
2009	77	0	26	27	5	0	0	3	2	11	151
2010	97	0	19	19	0	0	0	1	0	13	149
2011	60	1	16	12	1	0	0	1	0	18	109
2012	76	2	21	12	0	0	0	1	2	10	124
2013	77	2	18	13	1	0	0	0	3	16	130
Total	1761	39	477	465	70	29	25	53	28	387	3334

* Other includes people reported as transsexual, needle stick injuries and medical procedures overseas.

3.1.3 HIV reported through Refugee Health Assessment and Immigration Medical

Table 13 shows the number and proportion of the people diagnosed with HIV, since 1996, who were diagnosed as part of a refugee health assessment. This includes both quota refugees and asylum seekers. A column for Immigration Medical has been added in order to see changes following the implementation of Department of Labour regulations on the 28th November 2005.

Table 13 Annual number and proportion of new HIV diagnoses that occurred as part of a refugee health assessment and immigration medical, 1996–2013 (To the end of the fourth quarter)

Year of diagnosis	Refugee Health Assessment		Immigration Medical		Total
	N	%	N	%	
1996	11	11.8	0	0.0	93
1997	3	4.8	0	0.0	63
1998	40	38.8	0	0.0	103
1999	15	21.1	0	0.0	71
2000	16	18.8	0	0.0	85
2001	7	7.4	1	1.1	95
2002	5	4.7	1	0.9	107
2003	15	9.7	4	2.6	154
2004	9	5.7	5	3.2	157
2005	9	4.9	8	4.4	183
2006	6	3.4	52	29.5	176
2007	2	1.3	31	19.9	156
2008	12	6.5	41	22.3	184
2009	2	1.3	22	14.6	151
2010	3	2.0	11	7.4	149
2011	3	2.8	14	12.8	109
2012	2	1.6	15	12.1	124
2013	3	2.3	9	6.9	130
TOTAL	163	12.2	214	16.0	2290

3.1.4 Further information on how HIV infection was heterosexually acquired in New Zealand

The following two tables provide further information from Questions 13 and 14 of the data collection form. Table 14 was changed at the beginning of 2009 to report only people reported to be heterosexually infected in New Zealand. It is hoped the revised categories will show more clearly those who have been infected by someone not in a particular high-risk group. Where multiple possible means of infection were indicated a hierarchical scheme has been followed to identify the most likely means of infection, taking into account the place of infection.

Four people were heterosexually infected in New Zealand during the fourth quarter. Three people were New Zealand European and one was a Maori. For all four people, the risk status of their partners was unknown.

Table 14 Information pertaining to men and women thought to be heterosexually infected in New Zealand

		Quarter to 31.12.13	Twelve months to 31.12.13	Total 1.1.96 to 31.12.13
	Contact was with:			
Women	A man at high risk for HIV (including from a high HIV prevalence country, bisexual or an injecting drug user)	0	2	64
	A man not at high risk	0	0	6
	Unknown	2	3	27
Total		2	5	97
Men	A woman at high risk for HIV (including from a high HIV prevalence country or an injecting drug user)	0	1	21
	A woman not at high risk	0	0	11
	Unknown	2	8	33
Total		2	9	65

Table 15 Information pertaining to men who had sex with men

	Quarter to 31.12.13		Twelve months to 31.12.13		Total 1.1.96 to 31.12.13	
	N	%	N	%	N	%
(A)* MEN INFECTED WITH HIV	21		80		1138	
Homosexual	18	85.7	70	87.5	808	71.0
Bisexual	3	14.3	10	12.5	145	12.7
Awaiting information/undetermined	0	0.0	0	0.0	185	16.3
(B) SEXUAL CONTACT WAS WITH:						
A New Zealander in New Zealand	7	33.3	33	41.3	529	46.5
A visitor in New Zealand	0	0.0	1	1.3	26	2.3
A man overseas	6	28.6	24	30.0	272	23.9
Awaiting information/ undetermined	8	38.1	22	27.4	311	27.3
TOTAL	21	100.0	80	100.0	1138	100.0

*Section A was reinstated at the beginning of 2007 after being removed at the end of 2004.

3.2 HIV INFECTION REPORTED THROUGH VIRAL LOAD TESTING

3.2.1 HIV cases reported in this quarter

In this quarter, 22 people were reported by the laboratories as having first viral load testing in New Zealand. Of the 22 people, information on 15 people has been reported to the AEG.

Of the 15, four were diagnosed overseas and 11 were diagnosed in New Zealand.

Information is recorded according to the date of first viral load in New Zealand. The person's actual date of diagnosis of HIV may precede this by some months, or even years, therefore some discrepancy may be noted in the numbers presented. There are a small number of people for whom not information was available at the time of the compilation of a Quarterly report (hence included as Unknown in all Tables) who we were subsequently informed were HIV negative by the clinicians who were subsequently removed from the database.

An extra question was added to the viral load form in May 2007 asking if the patient's viral load test was part of an antenatal screen. This is to aid the monitoring of the antenatal screening programme commenced in September 2006 in the Waikato District Health Board and is being progressively rolled out to other DHB's.

To the end of 2013, a total of 618 people have been reported to the group through viral load testing.

Table 16 Demographic characteristics of those reported through viral load testing

Characteristics		Quarter to 31.12.2013		Twelve months to 31.12.13		Total to 31.12.13	
		N	%	N	%	N	%
Sex	Male	17	77.3	44	86.3	524	84.8
	Female	5	22.7	7	13.7	93	15.0
	Transgender	0	0.0	0	0.0	1	0.2
Age	0-4	0	0.0	0	0.0	5	0.8
	5-14	0	0.0	0	0.0	3	0.5
	15-19	1	4.5	2	3.9	16	2.6
	20-29	1	4.5	5	9.8	170	27.5
	30-39	8	36.4	17	33.3	195	31.6
	40-49	8	36.4	15	29.4	100	16.2
	50-59	4	18.2	7	13.7	42	6.8
	≥60	0	0.0	3	5.9	9	1.5
	Not stated	0	0.0	2	3.9	78	12.6
	Ethnic Group	European	8	36.4	25	49.0	392
Maori		1	4.5	3	5.9	44	7.1
Pacific Islands		1	4.5	2	3.9	20	3.2
African		1	4.5	1	2.0	39	6.3
Asian		1	4.5	5	9.8	31	5.0
South American		2	9.1	2	3.9	10	1.6
Other		1	4.5	1	2.0	22	3.6
Unknown		7	31.8	12	23.5	60	9.7
Usual residence	New Zealand	15	68.2	38	74.5	443	71.7
	<i>Northern</i>	11	73.3	25	65.8	210	47.4
	<i>Midland</i>	2	13.3	2	5.3	47	10.6
	<i>Central</i>	1	6.7	7	18.4	107	24.2
	<i>Southern</i>	1	6.7	4	10.5	79	17.8
	Overseas	0	0.0	1	2.0	64	10.4
	Died	0	0.0	0	0.0	44	7.1
	Unknown	7	31.8	12	23.5	67	10.8
TOTAL		22		51		618	

Table 17 Other characteristics of those reported through viral load testing

Characteristics		Quarter to 31.12.13		Twelve months to 31.12.13		Total to 31.12.13	
		N	%	N	%	N	%
Mode of infection	Homosexual/ bisexual	8	36.4	30	58.8	383	62.0
	Homosexual & IDU	0	0.0	0	0.0	8	1.3
	Injecting drug user	0	0.0	0	0.0	12	1.9
	Haemophilia	0	0.0	0	0.0	5	0.8
	Transfusion related	0	0.0	0	0.0	3	0.5
	Heterosexual	7	31.8	9	17.6	119	19.3
	Perinatal	0	0.0	0	0.0	5	0.8
	Other	0	0.0	0	0.0	9	1.5
	Unknown	7	31.8	12	23.5	74	12.0
Place of diagnosis	New Zealand	18	81.8	32	62.7	199	32.2
	Overseas	4	18.2	14	27.5	350	56.6
	Unknown	0	0.0	5	9.8	69	11.2
Country/ Region of infection	New Zealand	7	31.8	19	37.3	157	25.4
	New Zealand/other	0	0.0	0	0.0	5	0.8
	Australia	1	4.5	7	13.7	160	25.9
	Africa	2	9.1	2	3.9	57	9.2
	Asia	2	9.1	4	7.8	27	4.4
	Pacific Island	0	0.0	0	0.0	7	1.1
	Europe	1	4.5	3	5.9	64	10.4
	North America	0	0.0	0	0.0	37	6.0
	Latin America	2	9.1	2	3.9	7	1.1
	Middle East & North Africa	0	0.0	0	0.0	2	0.3
	Caribbean	0	0.0	0	0.0	4	0.6
	Unknown but not NZ	0	0.0	0	0.0	18	2.9
	Unknown	7	31.8	14	27.5	73	11.8
TOTAL		22		51		618	

For those who were reported to have been diagnosed in New Zealand, the number may include some duplicates with those reported through the Western blot system because codes were not available for everybody, especially prior to 1996 when enhanced surveillance began.

SECTION 4: NATIONAL SURVEILLANCE FINDINGS OF (4.1) BIRTHS TO KNOWN HIV INFECTED PREGNANT WOMEN (4.2) CHILDREN INFECTED THROUGH MOTHER-TO-CHILD TRANSMISSION (4.3) PREGNANT WOMEN DIAGNOSED WITH HIV

4.1 BIRTHS TO KNOWN HIV INFECTED PREGNANT WOMEN

National information on women known to be infected with HIV who give birth is collected by the AEG via the New Zealand Paediatric Surveillance Unit (NZPSU) run from the Department of Women's and Children's Health at the Dunedin School of Medicine, University of Otago and began in 1998. Every month the NZPSU contacts all specialist paediatricians to enquire whether they have cared for children with a number of conditions that are under surveillance. One of these conditions is babies born to women known to be infected with HIV. If the clinician had known of such a baby, he/she is asked to complete a short questionnaire related to when the mother was diagnosed, care provided for her, and the baby's HIV status.

Seven babies were reported as born to known HIV infected mother during 2013. Since this surveillance of children born to HIV-positive women diagnosed before or during pregnancy, none of the children have been infected, although it is too soon to say this about those born in 2013.

Table 18 provides information on the women for the years 1998-2013 (to the end of the fourth quarter). The information provided for each year might subsequently be updated if further information is received.

Table 18 Births in New Zealand to known HIV infected pregnant women. Information from 1998 to 2013

		Year of birth							
		2013		2012		2011		1998-2010	
		N	%	N	%	N	%	N	%
Region of birth	Northern	5	71.4	5	55.6	5	62.5	50	51.0
	Midland	1	14.3	3	33.3	2	25.	10	10.2
	Central	1	14.3	1	11.1	1	12.5	20	20.4
	Southern	0	0.0	0	0.0	0	0.0	18	18.4
	Unknown/awaiting	0	0.0	0	0.0	0	0.0	0	0.0
Timing of diagnosis	Before pregnancy	6	85.7	9	100.0	6	75.0	75	76.5
	During pregnancy	1	14.3	0	0.0	2	25.0	23	23.5
	Unknown/awaiting	0	0.0	0	0.0	0	0.0	0	0.0
Mother's ethnicity	European	0	0.0	0	0.0	1	12.5	16	16.6
	Maori	0	0.0	1	11.0	0	0.0	10	10.2
	Pacific	0	0.0	2	22.0	1	12.5	3	3.1
	Asian	3	42.9	3	33.0	1	12.5	13	13.3
	African	4	57.1	3	33.0	5	62.5	55	56.1
	Other	0	0.0	0	0.0	0	0.0	1	1.0
	Unknown/awaiting	0	0.0	0	0.0	0	0.0	0	0.0
Antiretroviral to mother	Yes	7	100.0	8	88.9	8	100.0	95	96.9
	No	0	0.0	1	11.1	0	0.0	0	0.0
	Unknown/awaiting	0	0.0	0	0.0	0	0.0	3	3.1
Antiretroviral to baby	Yes	7	100.0	9	100.0	8	100.0	82	83.7
	No	0	0.0	0	0.0	0	0.0	0	0.0
	Unknown/awaiting	0	0.0	0	0.0	0	0.0	16	16.3
Delivery	Vaginal	5	71.4	3	33.3	6	75.0	37	37.8
	Caesarian	2	28.6	6	66.7	2	25.0	60	61.2
	Unknown/awaiting	0	0.0	0	0.0	0	0.0	1	1.0
Baby breast fed	Yes	0	0.0	0	0.0	0	0.0	1	1.0
	No	7	100.0	9	100.0	8	100.0	96	98.0
	Unknown/awaiting	0	0.0	0	0.0	0	0.0	1	1.0
Baby infected	Yes	0	0.0	0	0.0	0	0.0	0	0.0
	No	0	0.0	2	22.2	1	12.5	89	90.8
	Unknown/awaiting information	7	100.0	7	77.8	7	87.5	9	9.2
TOTAL		7		9		8		98	

4.2 CHILDREN INFECTED THROUGH MOTHER-TO-CHILD TRANSMISSION

Information in Table 19 is obtained through national enhanced HIV surveillance through both the western blot antibody test and viral load test. No children were diagnosed with HIV, acquired through mother to child transmission during 2013.

Table 19 Children diagnosed with HIV acquired through mother to child transmission (by the year of diagnosis). Information from 1996 to 2013

		Year of diagnosis						
		2013		2011 - 2012		Total 1996 - 2010		
		N	%	N	%	N	%	
Region where diagnosed	Northern	0	0.0	1	50.0	25	50.0	
	Midland	0	0.0	0	0.0	8	16.0	
	Central	0	0.0	1	50.0	10	20.0	
	Southern	0	0.0	0	0.0	4	8.0	
	Overseas	0	0.0	0	0.0	3	6.0	
Ethnicity	European	0	0.0	0	0.0	2	4.0	
	Maori	0	0.0	0	0.0	6	12.0	
	Pacific	0	0.0	0	0.0	3	6.0	
	Asian	0	0.0	0	0.0	5	10.0	
	African	0	0.0	2	100.0	32	64.0	
	Other	0	0.0	0	0.0	2	4.0	
	Unknown	0	0.0	0	0.0	0	0.0	
Age at diagnosis	<6 months	0	0.0	0	0.0	6	12.0	
	6-11 months	0	0.0	0	0.0	2	4.0	
	1-4 years	0	0.0	0	0.0	18	36.0	
	≥ 5 years	0	0.0	2	100.0	24	48.0	
	Unknown	0	0.0	0	0.0	0	0.0	
Place of birth	New Zealand	0	0.0	1	50.0	22	44.0	
	<i>Year of birth: 2009</i>	0	0.0	0	0.0	0	0.0	
	<i>2008</i>	0	0.0	0	0.0	0	0.0	
	<i>2007</i>	0	0.0	0	0.0	1	4.5	
	<i>2006</i>	0	0.0	0	0.0	1	4.5	
	<i>2005</i>	0	0.0	0	0.0	3	13.6	
	<i>2004</i>	0	0.0	0	0.0	4	18.2	
	<i>2003</i>	0	0.0	0	0.0	3	13.6	
	<i>2002</i>	0	0.0	0	0.0	3	13.6	
	<i>2001</i>	0	0.0	0	0.0	2	9.1	
	<i>2000</i>	0	0.0	0	0.0	0	0.0	
	<i>Before 2000</i>	0	0.0	0	0.0	5	22.7	
	Overseas	0	0.0	1	50.0	28	56.0	
	Reason for diagnosis	Symptoms	0	0.0	1	50.0	16	32.0
		Mother/sibling diagnosed	0	0.0	1	50.0	12	24.0
Other		0	0.0	0	0.0	19	38.0	
Unknown		0	0.0	0	0.0	3	6.0	
FirstCD4 at diagnosis	<200	0	0.0	1	50.0	3	6.0	
	200-350	0	0.0	0	0.0	1	2.0	
	>350	0	0.0	1	50.0	15	30.0	
	Unknown	0	0.0	0	0.0	31	62.0	
TOTAL		0		2		50		

4.3 PREGNANT WOMEN DIAGNOSED WITH HIV

Information in Table 20 is obtained through national enhanced HIV surveillance through both the western blot antibody test and viral load test and is reported from 1996. One woman was diagnosed with HIV through antenatal testing during 2013.

Table 20 Women diagnosed with HIV through antenatal testing. Information from 1996 to 2013 (to the end of the third quarter)

		Year of diagnosis					
		2013		2011 - 2012		1996 - 2010	
		N	%	N	%	N	%
Region where diagnosed	Northern	1	100.0	2	50.0	14	46.7
	Midland	0	0.0	1	25.0	5	16.7
	Central	0	0.0	0	0.0	6	20.0
	Southern	0	0.0	1	25.0	5	16.7
Ethnicity	European	0	0.0	1	25.0	3	10.0
	Maori	0	0.0	0	0.0	3	10.0
	Pacific	1	100.0	0	0.0	2	6.7
	Asian	0	0.0	1	25.0	6	20.0
	African	0	0.0	2	50.0	15	50.0
	Other	0	0.0	0	0.0	1	3.3
	Unknown	0	0.0	0	0.0	0	0.0
Age at diagnosis	<20 years	0	0.0	0	0.0	2	6.7
	20-29 years	1	100.0	1	25.0	12	40.0
	≥30 years	0	0.0	3	75.0	16	53.3
	Unknown	0	0.0	0	0.0	0	0.0
First CD4 at diagnosis	<200	0	0.0	1	25.0	2	6.7
	200-499	0	0.0	0	0.0	7	23.3
	>500	0	0.0	2	50.0	7	23.3
	Unknown	1	100.0	1	25.0	14	46.7
TOTAL		1		4		30	

*The numbers of people diagnosed may increase due to delayed notification.

SECTION 5: SUMMARY

Since the beginning of 2002 the AIDS Epidemiology Group has been receiving regular reports from the four New Zealand laboratories performing viral load tests. This allows a cross check of data to ensure that all those living in New Zealand with HIV are included on the HIV database even though they may have originally been diagnosed with HIV overseas. This Quarterly Report reflects the two different sources of data – namely the Western blot antibody test (Section 3.1) and the viral load test (Section 3.2). To the end of December 2013, a total of 3952 people have been reported to be infected with HIV in New Zealand through either reporting system. The following two tables show HIV data combined from the two different sources.

Table 21 Exposure category by time of diagnosis for those found to be infected with HIV (by antibody test and viral load).

		HIV Infection*							
		1985-2003		2004-2012		2013		Total	
Sex	Exposure category	N	%	N	%	N	%	N	%
Male	Homosexual contact	1163	56.1	871	51.2	106	58.8	2140	54.1
	Homosexual & IDU	26	1.3	19	1.1	2	1.1	47	1.2
	Heterosexual contact	212	10.2	296	17.4	21	11.6	529	13.4
	Injecting drug use	53	2.6	16	1.0	1	0.6	70	1.8
	Blood product recipient	34	1.6	0	0.0	0	0.0	34	0.9
	Transfusion recipient [§]	9	0.4	4	0.2	0	0.0	13	0.3
	Perinatal	13	0.6	25	1.5	0	0.0	38	1.0
	Other	4	0.2	5	0.3	1	0.6	10	0.3
	Unknown	237	11.5	125	7.4	24	13.3	386	9.8
Female	Heterosexual contact	234	11.3	279	16.4	19	10.6	532	13.4
	Injecting drug use	11	0.6	1	0.1	0	0.0	12	0.3
	Transfusion recipient [§]	8	0.4	2	0.1	0	0.0	10	0.3
	Perinatal	11	0.5	9	0.5	0	0.0	20	0.5
	Other	7	0.3	9	0.5	1	0.6	17	0.4
	Unknown	24	1.2	35	2.1	4	2.2	63	1.6
Transgender	Total	8	0.4	4	0.2	1	0.6	13	0.3
NS	Transfusion recipient	5	0.2	0	0.0	0	0.0	5	0.1
	Unknown	13	0.6	0	0.0	0	0.0	13	0.3
TOTAL		2072	100.0	1700	100.0	180	100.0	3952	100.0

NS = Not stated

§ All *acquired overseas*

* Includes people who have developed AIDS. HIV numbers are recorded by time of diagnosis for those reported through antibody testing and by time of first viral load for those reported through viral load testing. The latter include many who have initially been diagnosed overseas and not had an antibody test here. Also, the date of initial diagnosis may have preceded the viral load date by months or years.

Table 22 Ethnicity by time of diagnosis in New Zealand for those found to be infected with HIV (by antibody test and viral load).

		HIV Infection*							
		1996-2003		2004-2012		2013		Total (From 1/1/1996)	
Sex	Ethnicity	N	%	N	%	N	%	N	%
Male	European/Pakeha	514	50.0	739	43.5	77	42.8	1330	45.8
	Maori†	60	5.8	116	6.8	8	4.4	184	6.3
	Pacific Island	19	1.9	42	2.5	5	2.8	66	2.3
	African	96	9.3	155	9.1	4	2.2	255	8.7
	Asian	91	8.8	158	9.3	33	18.3	282	9.7
	Other	19	1.9	90	5.3	6	3.3	115	4.0
	Unknown	20	1.9	61	3.6	22	12.2	103	3.5
Female	European/Pakeha	53	5.2	48	2.8	6	3.3	107	3.7
	Maori†	7	0.7	16	0.9	2	1.1	25	0.9
	Pacific Island	13	1.3	15	0.9	3	1.7	31	1.1
	African	88	8.6	173	10.2	2	1.1	263	9.0
	Asian	44	4.3	52	3.1	7	3.9	103	3.5
	Other	1	0.1	17	1.0	1	0.6	19	0.7
	Unknown	1	0.1	14	0.8	3	1.7	18	0.6
Transgender	Total	1	0.1	4	0.2	1	0.6	6	0.2
TOTAL		1027	100.0	1700	100.0	180	100.0	2907	100.0