

# AIDS – New Zealand

## 125 Year Celebration: Preventive & Social Medicine

Symposium in honour of

### PROFESSOR SIR DAVID SKEGG

(Founder of the AIDS Epidemiology Group)

### Epidemiology and Sexual and Reproductive Health

Saturday 5 March 2011, University of Otago, Dunedin  
Registration at [www.otago.ac.nz/dsm/psm](http://www.otago.ac.nz/dsm/psm)

## HIV INFECTION AND AIDS DIAGNOSED IN NEW ZEALAND IN 2010

### HIV INFECTION

- 149 people were diagnosed with HIV through antibody testing in New Zealand in 2010.
- 90 were men infected through sex with other men, 35 (17 men and 18 women) through heterosexual contact, and one child through mother-to-child transmission. For the remaining 23 people the means of infection was unknown or information is still awaited.
- A further 36 people with HIV infection who had not had an antibody test in New Zealand, had a first viral load test in 2010. These were mostly people who had been previously diagnosed overseas. 20 were men infected through sex with other men, 4 (1 man and 3 women) through heterosexual contact, and one was infected through injecting drug use overseas. For the remaining 11 people the means of infection was unknown or information is still awaited.

### AIDS

- 39 people were notified with AIDS in 2010. 25 were men infected through sex with other men, 11 (6 men and 5 women) through heterosexual contact, 1 through injecting drug use, and for 2 people the means of infection was unknown.

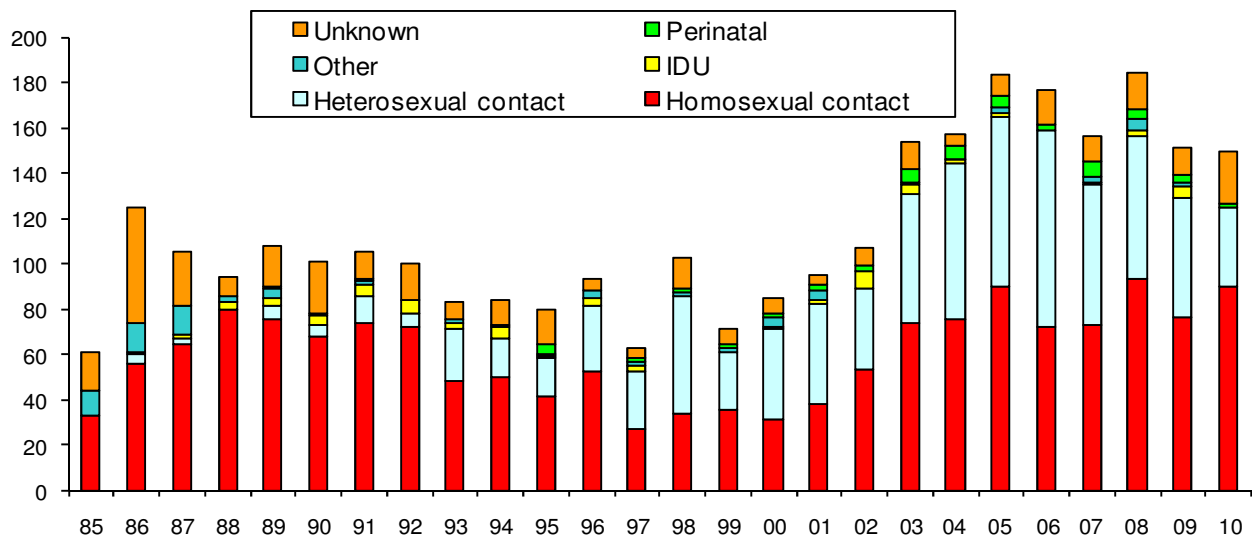


Figure 1 Number of people diagnosed with HIV in New Zealand through antibody testing by year of diagnosis\* and means of infection. (\*Infection might have occurred some time before diagnosis.)

## HIV INFECTIONS DIAGNOSED - 2010

Figure 1 (previous page) shows the annual number of people diagnosed with HIV in New Zealand, through antibody testing, since this began in 1985. It is important to appreciate that this graph represents the number of people diagnosed rather than infected with HIV each year, and that these people were not necessarily infected in New Zealand.

In 2010, the total number diagnosed was 149 which was similar to that diagnosed in the previous year.

A further 36 people were reported with HIV through viral load testing; mostly people who were previously diagnosed overseas. These are not included in this figure as these data have only been collected since 2002.

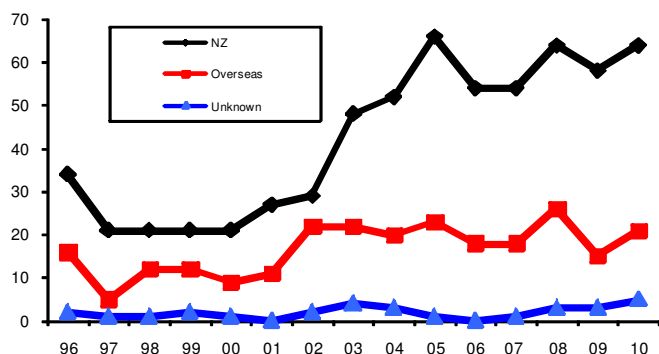
### *HIV diagnoses among men who had had sex with men (MSM) - 2010*

Overall, 90 MSM were diagnosed with HIV through antibody testing in 2010, a similar number to those diagnosed in 2008 (93) which was the highest number of MSM ever diagnosed in one year.

Of the 90 MSM, 64 (71%) were European, 9 (10%) Māori, 9 (10%) Asian, 1 (1%) Pacific, and 7 (8%) 'other' or unknown ethnicity. Almost half (40%) were living in Auckland, 28% in Wellington, 10% in other parts of the North Island, 17% in the South Island, and 5% overseas at the time of diagnosis.

The average age of these MSM was 38 years. Two (2%) were in the 15-19 year age group, 27 (30%) aged 20-29 years, 22 (24%) aged 30-39 years, 24 (27%) aged 40-49 years, and 15 (17%) aged 50 or more. While these data do not show the age at the time of infection it indicates that among MSM, HIV infection should be considered across a wide age range.

For 64 (71%) of the 90 MSM, the infection was reported to have occurred in New Zealand. Figure 2 shows the place of infection for MSM since 1996.



**Figure 2** Place of infection of MSM diagnosed by antibody test, by year of diagnosis

Of these 64 men infected in New Zealand, 35 were reported to have had a previous negative test, 20 within the past 2 years. This shows new HIV infections are continuing to occur among MSM in New Zealand.

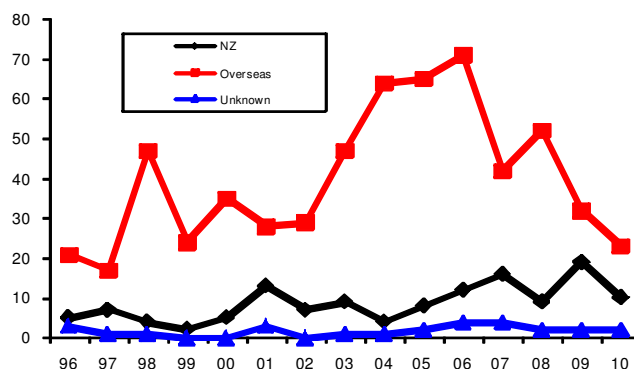
The initial CD4+ lymphocyte count gives an indication of the stage of infection at the time of HIV diagnosis. An initial CD4+ count was reported to us for 79 (88%) MSM. Of these, 22 (28%) had a count of 200 cells per cubic mm or less. A further 16 (20%) had a CD4+ count between 201 and 350 cells per cubic mm. Hence for nearly half of those with a CD4 count reported to us, their infection was not diagnosed until it had progressed past the stage where antiretroviral therapy is generally recommended.

A further 20 MSM were reported with HIV through viral load testing, 14 of whom were initially diagnosed overseas. Of the 20, 15 (75%) were of European ethnicity, 3 (15%) Māori, and 2 (10%) of 'other' ethnicity.

### *HIV diagnoses among people heterosexually infected - 2010*

Overall 35 people (17 men and 18 women) were diagnosed with heterosexually acquired infection in 2010. Of these, 12 (34%) were African, 8 (23%) Asian, 11 (31%) European, 1 (3%) Māori, 1 (3%) Pacific, and 2 (6%) of 'other' or unknown ethnicity.

Of the 35 people, 10 (28%) were reported to have been infected in New Zealand, 23 (66%) overseas, and for 2 (6%) people this information was not available.



**Figure 3** Place of infection of those infected through heterosexual contact, diagnosed by antibody test, by year of diagnosis

Figure 3 shows the trends in the annual number of people diagnosed by place of infection since 1996. There has been a marked drop in the number of people diagnosed with heterosexually acquired HIV overseas since it peaked in 2006 (the drop is believed mainly due to fewer people being diagnosed who were tested for immigration purposes in New Zealand).

Of the 10 people (4 men and 6 women) infected heterosexually in New Zealand, 2 (20%) were African, 6 (60%) European, 1 (10%) Asian, and 1 (10%) of Pacific ethnicity.

Two of the 4 men heterosexually infected in New Zealand reported a partner from a high prevalence country, and for 2 men information on the partner's risk was not available. For the 6 women heterosexually infected in New Zealand, 3 were infected by a partner from a

high prevalence country, and for 3 women no information was available.

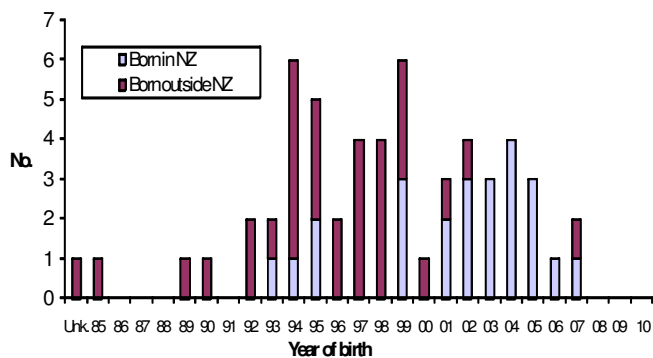
A further 4 people infected through heterosexual contact were reported with HIV through viral load testing, all of whom were initially diagnosed overseas.

#### **Children infected through mother-to-child transmission - 2010**

One child, who was born in New Zealand in 2006, was diagnosed in 2010 with HIV that had been acquired through mother-to-child transmission.

Figure 4 shows the number of children diagnosed with HIV through mother-to-child transmission by year of birth. Of the 24 children born in New Zealand, 7 were not diagnosed until over the age of 3 years. So it is highly likely that there are children born in recent years living with undiagnosed HIV.

Since 1995, there have been 96 births to women known to be infected with HIV at the time of delivery. None of these children have been infected with HIV.



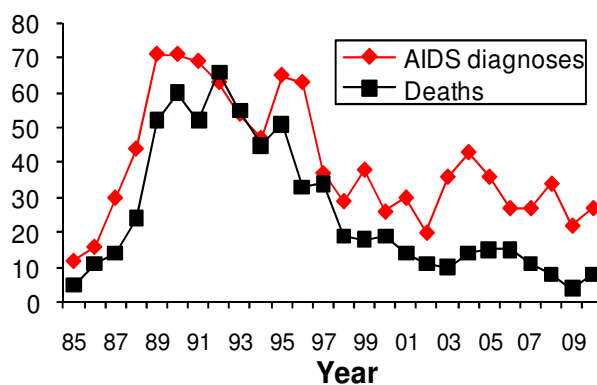
**Figure 4** Number of children diagnosed with mother-to-child transmission in New Zealand, by year of birth

#### **AIDS NOTIFICATIONS - 2010**

A total of 39 people were notified with AIDS in 2010. Twenty-five were MSM, 11 (6 men and 5 women) were infected through heterosexual contact, 1 through injecting drug use overseas, and for 2 people the means of transmission was unknown. Of these 39, 23 (59%) were European, 8 (20%) Māori, 3 (8%) African, 3 (8%) Asian and 2 (5%) of another ethnicity.

Twenty six (67%) had their AIDS diagnosis within 3 months of being diagnosed with HIV and therefore probably would not have had the opportunity for anti-retroviral treatment to control progression of their HIV infection. This suggests that there would be even fewer people progressing to AIDS if more people were presenting for HIV testing.

Figure 5 shows the annual number of notifications of AIDS by year of diagnosis and the number of deaths of people with AIDS notified.



**Figure 5** Annual number diagnoses of AIDS and deaths among people notified with AIDS (The number of notifications and deaths for 2010 might rise due to delayed reports)

### **NUMBERS OF PEOPLE WITH HIV UNDER CARE IN NEW ZEALAND**

While 3474 people have ever been diagnosed with HIV in New Zealand, this number will not be the number currently under care. We know that 678 people diagnosed with HIV, who developed AIDS, have died. Of the remaining 2796 some will have gone overseas, others may have died without meeting criteria for AIDS (or not been notified), and others may have opted out of ongoing care.

The AIDS Epidemiology Group has used two sources of information to estimate the current number of people under care with HIV. Firstly, in December 2010 we asked this of all specialists in New Zealand approved to prescribe antiretroviral therapy (ART). Secondly, we requested from PHARMAC the number of people receiving subsidised antiretroviral therapy.

Overall the specialists reported 1874 people were under their care, with an estimate of just under 80% (or about 1490) on ART. PHARMAC data showed 1348 people were receiving ART at the end of June 2010 (the last date available), an increase of 144 over the previous 12 months. If this rate of increase was maintained by the end of 2010 there would have been 1420 on subsidised ART based on PHARMAC data. PHARMAC were also able to say that 81% of people on treatment were men and 19% women. Children aged under 15 comprised of 2%.

The specialists also reported that overall at least 300 people were known to have gone overseas or left care for other reasons. While there might be some people with diagnosed HIV under the care of clinicians not registered to prescribe ART this number is likely to be small.

We conclude that the two data sources give very similar estimates of people under treatment (1400 -1500). On the basis that this represents 80% of all people alive with diagnosed HIV, the estimated total is around 1800.

**Table 1. Exposure category by time of diagnosis for those found to be infected with HIV by antibody test and first viral load test.**

		HIV Infection*							
		1985-2003		2004-2009		2010		Total	
Sex	Exposure category	No	%	No	%	No	%	No	%
Male	Homosexual contact	1163	56.1	580	47.7	109	58.9	1852	53.3
	Homosexual & IDU	26	1.3	16	1.3	0	0.0	42	1.2
	Heterosexual contact	212	10.2	228	18.7	18	9.7	458	13.2
	Injecting drug use	53	2.6	12	1.0	1	0.5	66	1.9
	Blood product recipient	34	1.6	0	0.0	0	0.0	34	1.0
	Transfusion recipient <sup>§</sup>	9	0.4	4	0.3	0	0.0	13	0.4
	Perinatal	13	0.6	22	1.8	1	0.5	36	1.0
	Other	4	0.2	5	0.4	0	0.0	9	0.3
	Unknown	238	11.5	82	6.7	30	16.2	350	10.1
Female	Heterosexual contact	234	11.3	222	18.2	21	11.4	477	13.7
	Injecting drug use	11	0.5	0	0.0	0	0.0	11	0.3
	Transfusion recipient <sup>§</sup>	8	0.4	2	0.2	0	0.0	10	0.3
	Perinatal	11	0.5	9	0.7	0	0.0	20	0.6
	Other	7	0.3	7	0.6	0	0.0	14	0.4
	Unknown	24	1.2	25	2.1	4	2.2	53	1.5
Transgender	Total	8	0.4	2	0.2	1	0.5	11	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	0.4
<b>TOTAL</b>		2073	100.0	1216	100.0	185	100.0	3474	100.0

\* 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. The date of initial diagnosis may have preceded the viral load date by months or years.

NS = Not stated      § All people in this category, diagnosed since 1996, infection was acquired overseas

**Table 2. Ethnicity<sup>‡</sup> by time of diagnosis in New Zealand for those found to be infected with HIV by antibody test and first viral load test.**

		HIV Infection*							
		1996-2003		2004-2009		2010		Total	
Sex	Ethnicity	No	%	No	%	No	%	No	%
Male	European/Pakeha	513	50.0	503	41.4	90	48.6	1106	45.6
	Maori <sup>†</sup>	60	5.8	84	6.9	15	8.1	159	6.5
	Pacific Island	18	1.8	31	2.5	1	0.5	51	2.1
	African	96	9.3	138	11.3	7	3.8	241	9.9
	Asian	91	8.9	99	8.1	13	7.0	203	8.4
	Other	19	1.9	54	4.4	9	4.9	82	3.4
	Unknown	22	2.1	40	3.3	24	13.0	85	3.5
Female	European/Pakeha	53	5.2	35	2.9	6	3.2	94	3.9
	Maori <sup>†</sup>	7	0.7	12	1.0	0	0.0	19	0.8
	Pacific Island	13	1.3	12	1.0	1	0.5	26	1.1
	African	88	8.6	148	12.2	7	3.8	243	10.0
	Asian	44	4.3	34	2.8	6	3.2	84	3.5
	Other	1	0.1	13	1.1	2	1.1	16	0.7
	Unknown	1	0.1	11	0.9	3	1.6	15	0.6
Transgender	Total	1	0.1	2	0.2	1	0.5	4	0.2
<b>TOTAL</b>		1027	100.0	1216	100.0	185	100.0	2428	100.0

<sup>‡</sup> Information on ethnicity of people diagnosed with HIV only collected since 1996

\* 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. The date of initial diagnosis may have preceded the viral load date by months or years.

<sup>†</sup> Includes people who belong to Maori and another ethnic group

For further information about the occurrence of HIV/AIDS in New Zealand, contact:  
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