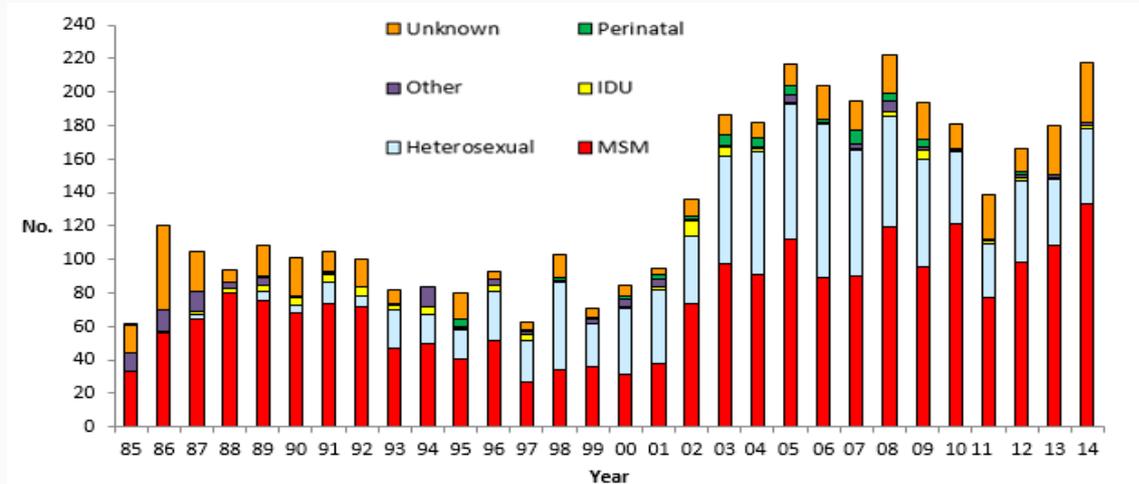


# AIDS – New Zealand



**Figure 1: Number of people diagnosed with HIV in New Zealand through Western Blot antibody test and since 2002 through viral load (VL) testing, by year of diagnosis and means of infection.** It is important to appreciate that infection may have occurred a number of years prior to diagnosis

## HIV diagnoses in 2014

As there was no mid-year report of HIV diagnoses in 2014, in this issue of AIDS-New Zealand, the number of people diagnosed with HIV for all of 2014 is reported.

In 2014, 217 people were first known to be infected with HIV in New Zealand, 117 through Western Blot antibody testing and 100 through viral load testing. Of these 217, 25 had been previously diagnosed overseas.

Of the 217, 136 were men who have sex with men (MSM), and 45 (23 men and 22 women) were infected through heterosexual contact. Two people (one man and one woman) were infected by injecting drug use (IDU) and two women were infected by other means. For the remaining 32 people (30 men, 2 women) the means of infection was unknown or information is still to be received.

The total number of diagnoses in 2014 (217) was somewhat higher than in 2013 (180) (Figure 1), especially among the MSM in whom it rose from 114 in 2013 to 136 in 2014. It is important to appreciate that the number diagnosed each year will not be the same as the number infected, as people may be infected for many years before being diagnosed.

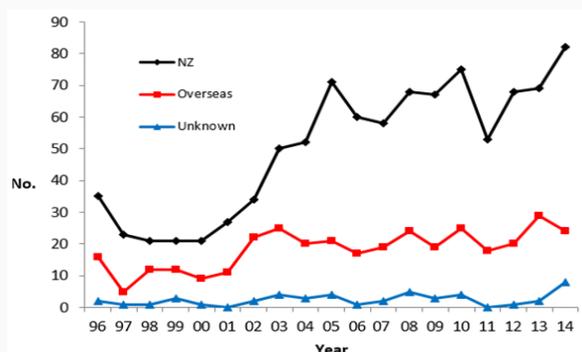
## HIV diagnoses among gay, bisexual and other men who have sex with men (MSM)

In 2014, of the 136 MSM found to be infected, 117 were first diagnosed in New Zealand and 19 had previously been diagnosed overseas. The number first diagnosed in New Zealand is higher than the equivalent number of 100 in 2013. The annual numbers diagnosed in New Zealand

by place of infection since 1996 are shown in Figure 2. The number of these men infected locally rose steeply between 2001 and 2005. Since then there have been moderate annual fluctuations with no clear trend up or down. However, it is of concern that this number rose to the highest figure ever in 2014.

The initial CD4 lymphocyte count gives an indication of the stage of HIV infection at diagnosis, with a European study showing that on average about half infected people will drop their CD4 count to 500 cells per cubic mm in the 14 months following infection.

Of 86 MSM diagnosed and infected with HIV in New Zealand in 2014, 83 reported an initial CD4 count. Of these 83, 39 (47%) had a CD4 count of greater than 500; this number and proportion is higher than for each of the previous four years, when the average annual number with a CD4 count of over 500 was 24, or 39% of MSM infected in New Zealand.



**Figure 2 Place of infection of MSM first diagnosed in New Zealand by antibody test annually since 2006 and including those reported by viral load testing since 2002**

This increase in diagnoses of relatively recently infected MSM might be reflection of a true rise in new infections, or of more testing of MSM at risk of acquiring HIV. While the information for new diagnoses in 2015 available next year will give an indication of the likely explanation, the rise serves as a reminder that HIV prevention activities among MSM must be maintained.

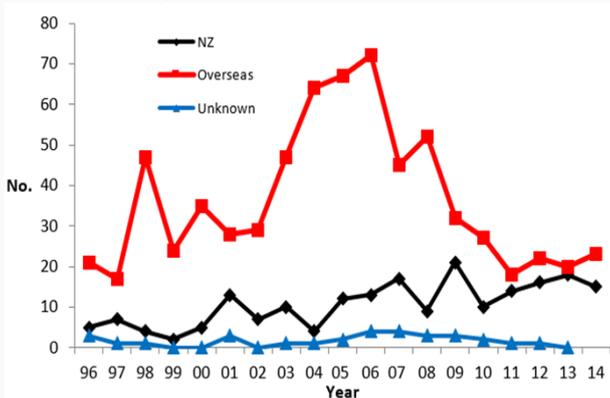
Of all the 136 MSM found to be infected in 2014, which includes those previously diagnosed overseas:

- 82 (60%) were New Zealand European, 20 (15%) Asian, 17 (13%) Maori, seven Pacific Islanders (5%) and 10 (7%) of other ethnicities.
- 79 (58%) were living in Auckland, 19 (14%) in Wellington, 21 (15%) in other parts of the North Island, and 10 (8%) in the South Island. Seven (5%) reported that they normally lived overseas.
- The age range of MSM at diagnosis was 18-74 years; 47 (35 %) were aged <30 years, 32 (24%) aged 30-39 years, 33 (24%) aged 40-49 years, and 24 (17%) aged 50 or more. Of course, infection may have occurred at a younger age than when it was diagnosed.

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

In 2014, of the 45 people found to be infected with HIV who had been heterosexually infected, 38 were first diagnosed in New Zealand (i.e. had not been previously diagnosed overseas). The same number were first diagnosed here in 2013, and a very similar number (39) in 2012.

The annual numbers first diagnosed in this country with heterosexually acquired HIV by place of infection are shown in Figure 3. The number diagnosed each year infected in New Zealand has risen gradually since the mid-1990s, although still very much smaller than the number of MSM.



**Figure 3 Place of infection of people first diagnosed in New Zealand with heterosexually-acquired HIV by antibody test annually since 2006 and including those reported by viral load testing since 2002**

In 2014, of all 45 people heterosexually-infected (which includes those previously diagnosed overseas), 18 were men and 27 women. Overall 22 (49%) were New Zealand European, eight (18%) African, six (13%) Asian, four (9%) Pacific, three (7%) Maori, and two (4%) of other ethnicity. Their ages ranged from 18 to 75 years. Of the 16 heterosexually infected in New Zealand, 8 (50%) were New

Zealand European, four (25%) Pacific, two (13%) Maori, one (6%) African, and one (6%) of another ethnicity.

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

In 2014, there were no children diagnosed with HIV infection through mother-to-child transmission in New Zealand. While there have been none diagnosed with HIV who were born since 2007, there may be children living with unrecognised HIV born since then or even earlier, as they may not be diagnosed for many years.

Between 1998-2014, there were 128 births to women known to be HIV infected prior to delivery in New Zealand, none of whom have been infected with HIV. However it is too soon to be sure about this for all children born in 2014.

In 2014, there was one pregnant women diagnosed with HIV, and overall there have been six in the period 2011-2014. As the majority of pregnant women are now tested, this shows a very low prevalence among such women.

#### **People who inject drugs (PWID)**

The number of people diagnosed with HIV in whom injecting drug use was reported as the only likely means of infection has remained low, with only two people diagnosed in New Zealand in 2014, and overall seven in the period 2011-2014, of whom four were reported infected overseas.

#### **The Number of people living with HIV in New Zealand**

There is no register of people living with HIV in New Zealand but an estimate of this can be made from the number of people on antiretroviral medication.

At the end of June 2014 there were 1886 people (1526 men, 340 women and 20 children) receiving subsidised ARTs, compared with 1737 for 2012. The estimated number at the end of 2014 was 1960. Assuming that 85% of those diagnosed are on subsidised ART, there were 2306 people with diagnosed HIV living in New Zealand at the end of 2014. If 20% of infected people are undiagnosed, the total number of people in New Zealand is approximately 2900; a low total prevalence of around 64 per 100,000 total population.

The estimated number living with diagnosed HIV in New Zealand is less than the total ever found to be infected, because of some people going overseas and others dying.

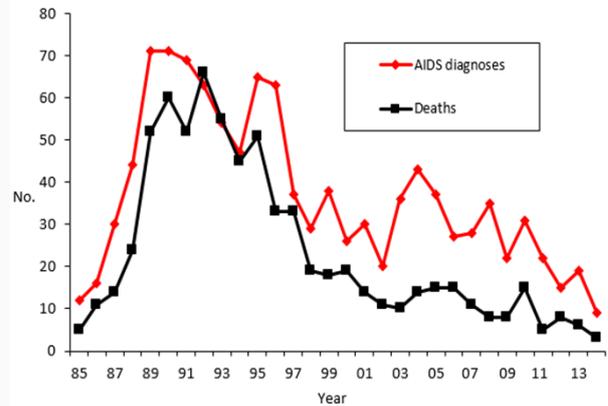
#### **AIDS Notifications - 2014**

Overall 19 people were notified with AIDS in 2014. Of these, 11 were MSM, seven (four men and three women) were infected heterosexually, and for one person the means of transmission was unknown or not reported.

Twelve (63%) were of New Zealand European ethnicity, two (11%) Maori, two (2%) Asian, one (1%) Pacific and two (11%) of other ethnicities.

Eleven (58%) had their AIDS diagnosis within three months of being diagnosed with HIV and would probably not have had the opportunity for antiretroviral 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 earlier for HIV testing. Figure 4 shows the annual number of notification of AIDS by year of diagnosis and the number of deaths of people with AIDS notified.



**Figure 4 Annual number of diagnoses of AIDS and deaths among people notified with AIDS** (The number of notifications and deaths for 2013 are expected to rise due to delayed reports)

### Summary of trends in HIV diagnoses in New Zealand

#### **Gay, bisexual and other men who have sex with men (MSM)**

Gay, bisexual and other men who have sex with men (MSM) remain most affected by HIV infection in New Zealand. In the late-1990s a low and stable number of MSM were diagnosed annually with HIV in New Zealand. This rose between 2001 and 2005, mainly due to an increase in those infected locally. Since then there has been no clear trend up or down, with some moderate annual fluctuations. However, there was a rise in diagnoses in 2014 due to the largest ever annual number of MSM diagnosed in New Zealand.

As well as the annual number being higher, the number with a high initial CD4 count was also greater in 2014 than in previous years. This indicates an increase in the number with a recently acquired infection being diagnosed. This could be a reflection of more new infections occurring, or more testing of those at risk. Future findings will indicate the most likely explanation.

Clearly HIV prevention efforts need to continue to focus on MSM in New Zealand, with a target of getting the new infection rate down to the levels experience in the 1990s. The strategies used should also aim to reduce risks of other sexually transmitted infections (STIs) such as syphilis, which have also seen a resurgence among MSM in recent years.

#### **Heterosexual men and women**

The number diagnosed with heterosexually acquired HIV also rose in the early 2000s. This was mainly due to an increase in people infected overseas, which has always been higher than those infected in New Zealand. Since the peak in 2006 the annual number has dropped due to fewer people infected overseas arriving in New Zealand. The annual number infected in New Zealand has risen gradually since the mid-1990s, and in 2014 was just a little under the number infected overseas, although still very much smaller than the number of MSM. It is important that HIV is considered a possibility in people with compatible clinical features even if they have not been at risk overseas.

#### **People who inject drugs (PWID)**

New Zealand continues to have a small number of HIV diagnoses among people who inject drugs, a result of the early introduction of the Needle Exchange Programme (NEP). However if HIV were introduced into this population, and needle and syringe sharing occurred, it could spread rapidly.

#### **Children**

There have been no children diagnosed with perinatally acquired HIV born in New Zealand since 2007. However there maybe children living with unrecognised HIV born since then or even earlier, as the last child diagnosed was over ten years old at the time.

**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		2004-2013		2014		Total	
Sex	Exposure category	N	%	N	%	N	%	N	%
Male	Homosexual contact	1163	56.1	983	52.0	135	62.2	2281	54.8
	Homosexual & IDU	26	1.3	21	1.1	1	0.5	48	1.2
	Heterosexual contact	212	10.2	316	16.8	23	10.6	551	13.2
	Injecting drug use	53	2.6	17	0.9	1	0.5	71	1.7
	Blood product recipient	34	1.6	0	0.0	0	0.0	34	0.8
	Transfusion recipient <sup>§</sup>	9	0.4	4	0.2	0	0.0	13	0.3
	Perinatal	13	0.6	25	1.3	0	0.0	38	0.9
	Other	4	0.2	6	0.3	0	13.8	10	0.2
	Unknown	237	11.5	143	8.0	30	10.1	410	9.8
Female	Heterosexual contact	234	11.3	298	15.9	22	0.5	554	13.3
	Injecting drug use	11	0.6	1	0.1	1	0.0	13	0.3
	Transfusion recipient <sup>§</sup>	8	0.4	2	0.1	0	0.0	10	0.2
	Perinatal	11	0.5	9	0.4	0	0.9	20	0.5
	Other	7	0.3	10	0.5	2	0.9	19	0.5
	Unknown	24	1.2	39	2.1	2	0.0	65	1.6
Transgender	Total	8	0.4	5	0.3	0	0.0	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
<b>TOTAL</b>		<b>2072</b>	<b>100.0</b>	<b>1879</b>	<b>100.0</b>	<b>217</b>	<b>100.0</b>	<b>4168</b>	<b>100.0</b>

\* 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.

**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		2004-2013		2014		Total	
Sex	Ethnicity	N	%	N	%	N	%	N	%
Male	European/Pakeha	514	50.0	822	43.7	102	47.0	1440	46.1
	Maori <sup>†</sup>	60	5.8	124	6.5	21	9.7	205	6.5
	Pacific Island	19	1.9	57	2.5	10	4.6	76	2.4
	African	96	9.3	159	8.5	3	1.4	258	8.3
	Asian	91	8.8	191	10.2	24	11.0	306	9.8
	Other	19	1.9	96	5.1	11	5.1	126	4.0
	Unknown	20	2.0	76	4.0	19	8.8	113	3.6
Female	European/Pakeha	53	5.2	54	2.9	12	5.5	119	3.8
	Maori <sup>†</sup>	7	0.7	18	1.0	2	0.9	27	0.9
	Pacific Island	13	1.3	18	1.0	2	0.9	33	1.1
	African	88	8.6	175	9.3	6	2.8	269	8.6
	Asian	44	4.3	59	3.1	5	2.3	108	3.5
	Other	1	0.1	18	1.0	0	0.0	19	0.6
	Unknown	1	0.	17	0.9	0	0.0	18	0.6
Transgender	Total	1	0.1	5	0.3	0	0.0	6	0.2
<b>TOTAL</b>		<b>1027</b>	<b>100.0</b>	<b>1879</b>	<b>100.0</b>	<b>217</b>	<b>100.0</b>	<b>3123</b>	<b>100.0</b>

<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

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