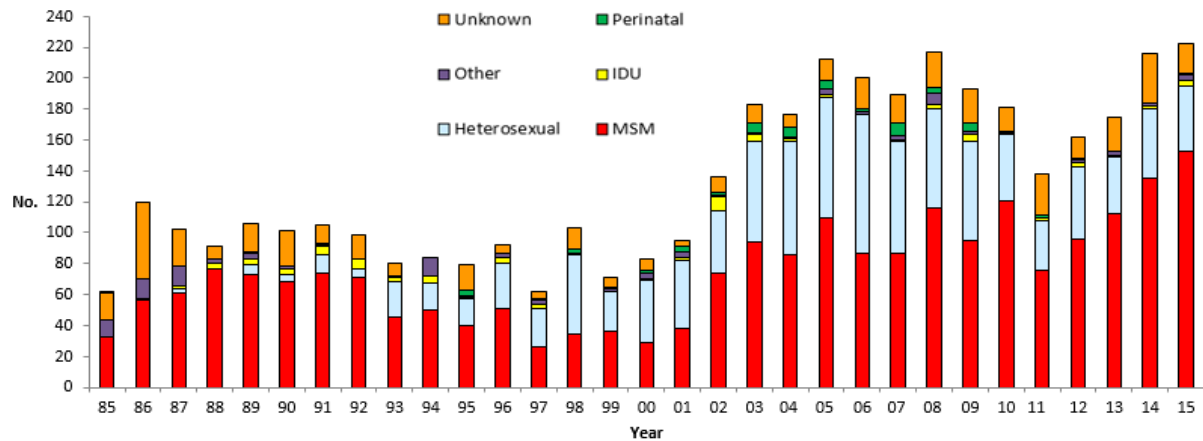


# AIDS – New Zealand



**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 2015

In 2015, 224 people (205 men, 18 women, and one transgender woman) were first known to be infected with HIV in New Zealand, 99 through Western Blot antibody testing and 125 through viral load testing. Of these 224, 39 had been previously diagnosed overseas.

Of the 224, 153 were men who have sex with men (MSM), two men were infected through either sex with another man or injecting drug use; 42 people (25 men, 17 women) were infected through heterosexual contact, four people (three men and one woman) were infected by injecting drug use (IDU); one child was infected perinatally overseas; one person was infected overseas by transfusion, and one person was infected by other means. The one transgender woman was infected by sex with a man. For the remaining 19 people (all men) the means of infection was unknown or information is still to be received.

The total number of diagnoses in 2015 (224) was slightly higher than in 2014 (217) (Figure 1); among the MSM it rose from 114 in 2013, 136 in 2014, to 153 in 2015. However, 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.

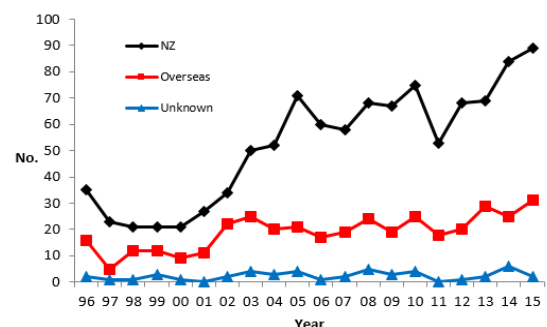
A lower proportion of people found to be infected were reported through Western Blot testing than in previous years, due to more laboratories confirming HIV infection by serological testing as has been recommended by US CDC.<sup>1</sup>

<sup>1</sup>Centers for Disease Control and Prevention and Association of Public Health Laboratories. Laboratory Testing for the Diagnosis of HIV Infection: Updated Recommendations. Available at <http://stacks.cdc.gov/view/cdc/23447>. Published June 27, 2014

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

In 2015, of the 153 MSM found to be infected, 120 were first diagnosed in New Zealand and 33 had previously been diagnosed overseas. The number diagnosed in New Zealand (120) is very similar to the equivalent number (117) in 2014. The annual numbers diagnosed in New Zealand by place of infection since 1996 are shown in Figure 2. The number of MSM infected locally rose steeply between 2001 and 2005, subsequently it was relatively stable for a number of years, however it was higher in both 2014 and 2015.

The initial CD4 lymphocyte count gives an indication of the stage of HIV infection at diagnosis, with about half dropping their CD4 count to 500 cells per cubic mm in the 14 months following infection. Here we have limited the reporting of the initial CD4 count to those 88 MSM diagnosed and infected in New Zealand as this group best indicates the underlying

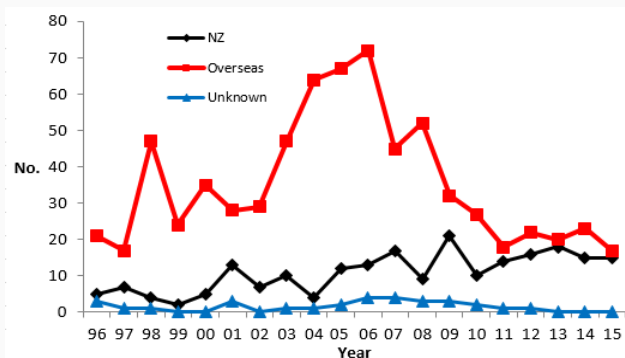


**Figure 2 Place of infection of MSM first diagnosed in New Zealand by antibody test annually since 1996 and including those reported by viral load testing since 2002**

incidence. Among the 87 for whom an initial CD4 was available, 36 (42%) had a CD4 count >500, 18 (21%) between 350-499, and 33 (38%) <350. The number with a CD4 count of >500 in 2015 (36) was slightly lower than the 42 in 2014. The average annual number with an initial CD4 >500 in 2014 and 2015 was 39, higher than the annual average of 24 for the period 2010-2013; the persisting increase in recent infections being diagnosed together with the increase in total diagnoses, suggests a true increase in incidence in recent years.

Of all 153 MSM found to be infected in 2015 (which includes those previously diagnosed overseas):

- 108 (71%) were Europeans, 20 (13%) Asians, 13 (9%) Maori, 5 Pacific (3%) and 7(4%) of other ethnicities.
- 86 (56%) were living in Auckland, 21(14%) in Wellington, 19 (12%) in other parts of the North Island, and 19 (12%) in the South Island. Twelve (8%) normally lived overseas.
- The age range at diagnosis was 18-80 years; 37 (24%) were aged <30 years, 38 (25%) aged 30-39 years, 40 (26%) aged 40-49 years, and 38 (25%) aged 50 or more. Of course, infection may have occurred at a younger age than when it was diagnosed.



**Figure 3 Place of infection of people first diagnosed in New Zealand with heterosexually-acquired HIV by antibody test annually since 1996 and including those reported by viral load testing since 2002**

### HIV diagnoses among people heterosexually infected

In 2015, 42 people found to be infected with HIV who had been heterosexually infected. From this 42, 36 were first diagnosed in New Zealand, very similar to the equivalent number (38) in 2014.

The annual numbers first diagnosed in New Zealand by place of infection are shown in Figure 3. The number diagnosed each year that were infected in New Zealand is higher than in the 1990s. However, the number of HIV diagnoses among people heterosexually infected have remained relatively stable over the past decade, and is very much smaller than the number of MSM.

In 2015, of all 42 people heterosexually-infected (which includes those previously diagnosed overseas):

- 25 (60%) were men and 17 (40%) women
- 25 (60%) were Europeans, 6 (14%) Asians, 4 (10%) Maori, 3 (7%) Africans, 3 (7%) Pacific, and 1 (3%) of other ethnicities
- The age range at diagnosis was 23-68 years; 9 (21%) were aged <30 years, 12 (29%) aged 30-39 years, 11 (26%) aged 40-49 years, and 10 (24%) aged 50 or

more. Of course, infection may have occurred at a younger age than when it was diagnosed.

Of the 42 people heterosexually infected with HIV in 2015, 16 were first diagnosed and infected in New Zealand. Of these 16, there were 11 (69%) Europeans, 4 (25%) Maori and one (6%) Asian. The initial CD4 count after diagnosis were reported for all 16. Of these 16, 4 (25%) had a CD4 count of >500, 4 (25%) between 350-499, and 8 (50%) <350. The proportion with a CD4 count of <350, which is considered a late diagnosis, was higher than for the comparable MSM (38%), indicating more delayed diagnosis in those heterosexually infected.

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

In 2015, one child who had been born overseas, was diagnosed in New Zealand with HIV infection through mother-to-child transmission. Since 2007, there have been no children with perinatally-acquired HIV born in New Zealand. However, as diagnosis might be delayed for many years, there may be children living with unrecognised infection born since then or even earlier. The AIDS Epidemiology Group (AEG) has been informed of one child with perinatally-acquired HIV recently diagnosed in Australia who was born in New Zealand in 2006.

Between 1998-2015, there were 134 births to women known to be HIV infected prior to delivery in New Zealand. None of these children have been infected with HIV. Note, however, for those 9 children born since mid-2014 it is too soon to be sure about this as acquired HIV cannot be definitively ruled out until they are over one year old.

In 2015, there were three women diagnosed with HIV through antenatal testing. As the majority of pregnant women in New Zealand are now tested, this indicates 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. Four people diagnosed in 2015 were infected in this way, two in New Zealand and two overseas.

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

The number of individuals living with diagnosed HIV in New Zealand will be less than the total ever found to be infected because of deaths from AIDS and non-AIDS related causes and the unknown number who have gone overseas.

Pharmac data shows there were 2059 adults (1699 men, 360 women) and 23 children receiving subsidised antiretroviral therapy (ART) at end of June 2015. This is 192 more adults (172 men and 20 women) and three more children compared with a year earlier.

Based on the assumptions that: (a) the number on ART increased to the end of 2015 at the same rate as in the previous year; (b) 80% people with HIV have been diagnosed and are under specialist care; and (c) 85% of people

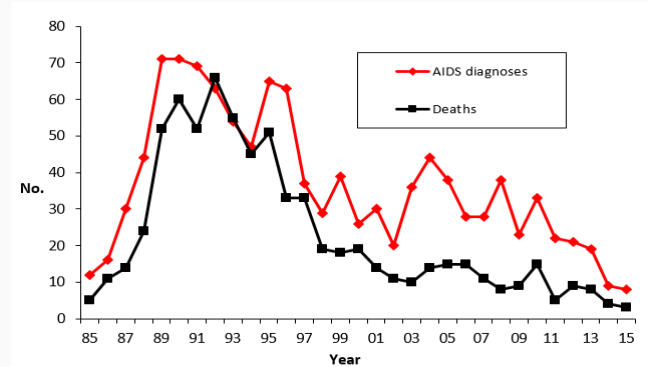
with HIV under specialist care are on ARTs, there are estimated to have been around 3200 people with HIV in New Zealand at the end of 2015. This equates to a prevalence of approximately 70 per 100,000 total population.

### AIDS Notifications - 2015

Overall nine people, eight men and one woman were notified with AIDS in 2015. Of these nine, four (45%) were MSM, two (22%) were infected heterosexually, one man (11%) was infected by either sex with another man or injecting drug use, and for two people (22%) the means of transmission were not reported.

Two (22%) were of Europeans, four (45%) Maori, one (11%) Asian, and two (22%) Pacific. Seven 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.

Figure 4 shows the annual number of diagnoses of AIDS by year of diagnosis and the number of deaths of people who had been notified with AIDS.



**Figure 4 Annual number of diagnoses of AIDS and deaths among people notified with AIDS** (The number of notifications and deaths for 2015 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. The number of these men infected within New Zealand rose steeply between 2001 and 2005, subsequently the annual number was relatively stable for a number of years, however this was higher in both 2014 and 2015. As well as the total being greater, the number with a high initial CD4 count, indicative of a relatively recent infection, was higher in 2014 and persisted in 2015. This suggests a true increase in incidence in recent years. This increase in incidence does not necessarily mean more risk behaviour among MSM, but could be due to a rising prevalence as a result of ongoing new infections and longer survival.

HIV prevention efforts need to continue to focus on MSM in New Zealand, and should include promotion of:

- Condom use
- Regular HIV testing especially among those at more risk
- Testing for other STIs, which increase the risk of acquisition and transmission of HIV.

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

The number diagnosed with heterosexually acquired HIV rose in the early 2000s. This was mainly due to an increase in the number of people infected with HIV overseas arriving in New Zealand. This number has always been higher than the number for those infected in New Zealand. Since the peak in 2006, the annual number diagnosed with HIV has dropped due to fewer people infected overseas arriving in New Zealand.

The annual number of people infected with HIV in New Zealand rose gradually in the decade from the mid-1990s to the mid-2000s. The number has been relatively stable since then and remains much smaller than the number of MSM infected with HIV in New Zealand.

Compared with MSM, a higher proportion of those heterosexually infected have a low CD4 count which is indicative of prolonged undiagnosed infection. 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). In all five serosurveys among users of the NEP between 1997 and 2013 have shown the prevalence to be less than 1%. However if needle sharing was to increase, HIV could spread rapidly among this group.

#### **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            |              | 2004-2014   |              | 2015       |              | Total       |              |
| Sex                                | Exposure category                  | N                    | %            | N           | %            | N          | %            | N           | %            |
| Male                               | Homosexual contact                 | 1163                 | 56.1         | 1120        | 53.4         | 153        | 68.0         | 2436        | 55.5         |
|                                    | Homosexual & IDU                   | 26                   | 1.3          | 22          | 1.1          | 2          | 1.0          | 50          | 1.1          |
|                                    | Heterosexual contact               | 212                  | 10.2         | 339         | 16.1         | 25         | 11.1         | 576         | 13.1         |
|                                    | Injecting drug use                 | 53                   | 2.6          | 18          | 0.8          | 3          | 1.3          | 74          | 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          | 1          | 0.4          | 14          | 0.3          |
|                                    | Perinatal                          | 13                   | 0.6          | 25          | 1.2          | 1          | 0.4          | 39          | 0.9          |
|                                    | Other                              | 4                    | 0.2          | 6           | 0.3          | 1          | 0.4          | 11          | 0.3          |
|                                    | Unknown                            | 237                  | 11.5         | 171         | 8.2          | 19         | 9.0          | 427         | 9.7          |
|                                    | Female                             | Heterosexual contact | 234          | 11.3        | 321          | 15.3       | 17           | 7.6         | 572          |
| Injecting drug use                 |                                    | 11                   | 0.6          | 2           | 0.1          | 1          | 0.4          | 14          | 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          | 0.0          | 20          | 0.5          |
| Other                              |                                    | 7                    | 0.3          | 12          | 0.6          | 0          | 0.0          | 19          | 0.4          |
| Transgender                        | Unknown                            | 24                   | 1.2          | 40          | 2.0          | 0          | 0.0          | 64          | 1.5          |
|                                    | Total                              | 8                    | 0.4          | 5           | 0.2          | 1          | 0.4          | 14          | 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>2096</b> | <b>100.0</b> | <b>224</b> | <b>100.0</b> | <b>4392</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.  
 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      |              | 2004-2014   |              | 2015       |              | Total       |              |
| Sex          | Ethnicity        | N              | %            | N           | %            | N          | %            | N           | %            |
| Male         | European         | 514            | 50.0         | 926         | 44.2         | 131        | 58.2         | 1571        | 47.0         |
|              | Maori†           | 60             | 5.8          | 145         | 6.9          | 16         | 7.1          | 221         | 6.6          |
|              | Pacific Islander | 19             | 1.9          | 58          | 2.8          | 6          | 2.7          | 83          | 2.5          |
|              | African          | 96             | 9.3          | 162         | 7.7          | 4          | 1.8          | 262         | 7.8          |
|              | Asian            | 91             | 8.8          | 215         | 10.3         | 26         | 11.6         | 332         | 9.9          |
|              | Other            | 19             | 1.9          | 108         | 5.2          | 8          | 3.6          | 135         | 4.0          |
|              | Unknown          | 20             | 2.0          | 91          | 4.3          | 14         | 6.7          | 125         | 3.8          |
| Female       | European         | 53             | 5.2          | 66          | 3.2          | 9          | 4.0          | 128         | 3.8          |
|              | Maori†           | 7              | 0.7          | 20          | 1.0          | 2          | 0.9          | 29          | 0.9          |
|              | Pacific Islander | 13             | 1.3          | 20          | 1.0          | 3          | 1.3          | 36          | 1.0          |
|              | African          | 88             | 8.6          | 181         | 8.6          | 1          | 0.4          | 270         | 8.1          |
|              | Asian            | 44             | 4.3          | 64          | 3.0          | 3          | 1.3          | 111         | 3.3          |
|              | Other            | 1              | 0.1          | 18          | 0.8          | 0          | 0.0          | 19          | 0.6          |
|              | Unknown          | 1              | 0.           | 17          | 0.8          | 0          | 0.0          | 18          | 0.5          |
| Transgender  | Total            | 1              | 0.1          | 5           | 0.2          | 1          | 0.4          | 7           | 0.2          |
| <b>TOTAL</b> |                  | <b>1027</b>    | <b>100.0</b> | <b>2096</b> | <b>100.0</b> | <b>224</b> | <b>100.0</b> | <b>3347</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.

† Includes people who belong to Maori and another ethnic group

For further information about the occurrence of HIV/AIDS in New Zealand, contact:  
 Ms. Bible Lee, AIDS Epidemiology Group, Department of Preventive and Social Medicine, Dunedin School of Medicine,  
 University of Otago, PO Box 56, Dunedin, New Zealand.  
 Website address: [www.otago.ac.nz/aidsepigroup](http://www.otago.ac.nz/aidsepigroup)  
 Phone: (03) 479 7220, Fax: (03) 479 7298, or Email [aidsepigroup@otago.ac.nz](mailto:aidsepigroup@otago.ac.nz)