

AIDS – New Zealand

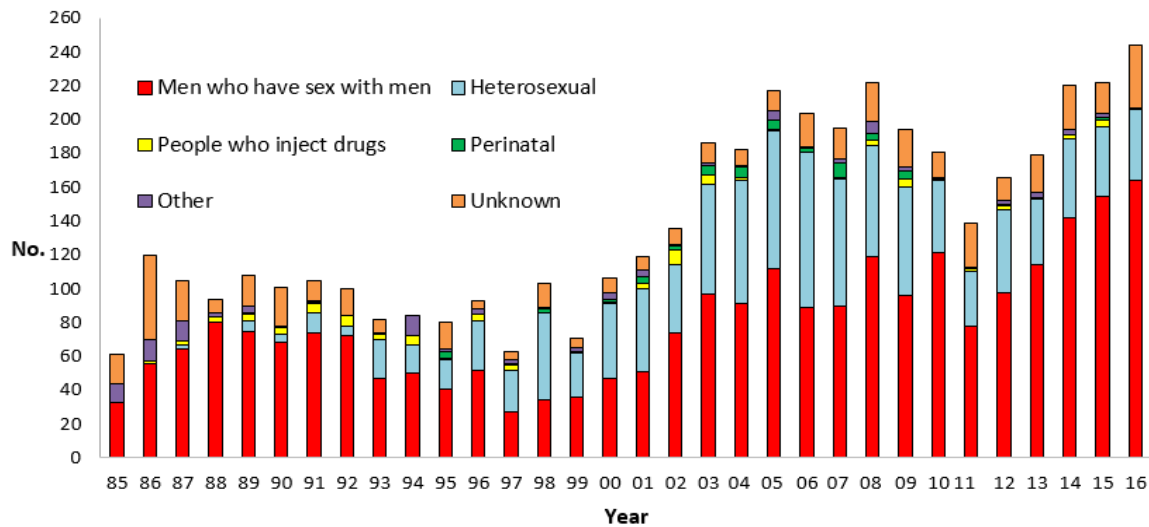


Figure 1: Number of people diagnosed with HIV in New Zealand through Western Blot antibody test and since 2002 through viral load (VL) testing, by year of diagnosis and means of infection. It is important to appreciate that infection may have occurred a number of years prior to diagnosis

HIV diagnoses in 2016

In 2016, 244 people (217 men, 27 women) were first known to be infected with HIV in New Zealand, 118 through Western Blot antibody testing and 126 through viral load testing. Of these 244, 30 had been previously diagnosed overseas.

Of the 244, 159 were men who have sex with men (MSM), 5 men were infected through either sex with another man or injecting drug use, 42 people (22 men, 20 women) were infected through heterosexual contact, and one person was infected by injecting drug use (IDU). For the remaining 37 people (30 men, 7 women) the means of infection was unknown or information is still to be received.

The total number of diagnoses in 2016 (244) was higher than in 2015 (224) (Figure 1). Among MSM the number diagnosed rose from 136 in 2014, 153 in 2015, to 159 in 2016. However, the number diagnosed each year will not be the same as the number infected, as people may be infected a number of years before being diagnosed.

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

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

In 2016, of the 159 MSM found to be infected, 137 were first diagnosed in New Zealand and 22 had previously been diagnosed overseas. The number diagnosed in New Zealand (137) is higher in comparison to 2015 (120). The annual numbers of MSM diagnosed in New Zealand by place of infection since 1996 are shown in Figure 2. This shows the number of MSM diagnosed and infected in New Zealand has increased since 2013, and the number in 2016 (98) was the highest ever.

The initial CD4 lymphocyte count gives an indication of the stage of HIV infection at diagnosis, with about 50% of people 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 98 MSM diagnosed and infected in New Zealand as this group best

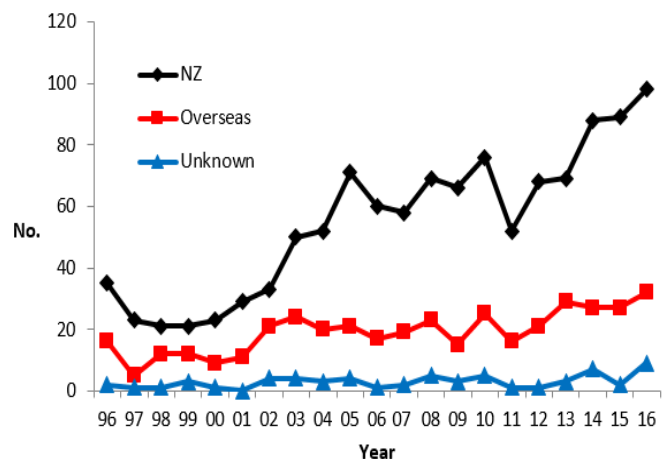


Figure 2: Place of infection of MSM first diagnosed in New Zealand by antibody test annually since 1996 and including those reported by viral load testing since 2002

¹Centers 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

indicates the underlying incidence. Among the 94 for whom an initial CD4 was available, 45 (48%) had a CD4 count ≥ 500 , 24 (26%) between 350-499, and 25 (26%) < 350 . The number with a CD4 count of ≥ 500 , indicating a recent infection, in 2016 (45) was higher than the 36 in 2015. The average annual number with an initial CD4 count ≥ 500 during 2014-2016 was 41, higher than the average annual of 25 for the period 2011-2013. The persisting increase in diagnosis of recent infections, along with the increase in total diagnoses suggests a true rise in incidence in recent years.

Of all 159 MSM found to be infected in 2016 (which includes those previously diagnosed overseas):

- 95 (60%) were European, 31 (20%) Asian, 15 (9%) Māori, 7 (4%) Pacific Islander and 11 (7%) of other ethnicities.
- 94 (59%) were living in Auckland, 21 (13%) in Wellington, 20 (13%) in other parts of the North Island, and 14 (9%) in the South Island. Ten (6%) normally lived overseas.
- The age range at diagnosis was 18-79 years; 58 (36%) were aged < 30 years, 42 (26%) aged 30-39 years, 31 (20%) aged 40-49 years, and 28 (18%) aged 50 or more. Infection, however, may have occurred at a younger age than when it was diagnosed.

HIV diagnoses among people heterosexually infected

In 2016, 42 people were found to be infected with HIV who had been heterosexually infected. From this 42, 35 were first diagnosed in New Zealand, very similar to the number in 2015 (34).

The annual numbers of people first diagnosed in New Zealand by place of infection are shown in Figure 3. The number of HIV diagnoses among people heterosexually infected has remained relatively stable since 2010 with similar numbers infected in New Zealand and overseas, and is very much smaller than the number of MSM diagnosed.

In 2016, of all 42 people heterosexually-infected (which includes those previously diagnosed overseas):

- 22 (52%) were men and 20 (48%) women.
- 16 (38%) were European, 18 (43%) Asian, 1 (2%) Māori, 5 (13%) African, 1 (2%) Pacific Islander, and 1 (2%) of another ethnicity.
- The age range at diagnosis was 20-78 years; 9 (21%) were aged < 30 years, 14 (33%) aged 30-39 years, 14 (33%) aged 40-49 years, and 5 (13%) aged 50 years or more. Infection may have occurred at a younger age than when it was diagnosed.

An initial CD4 count after diagnosis was available for 11 people diagnosed and heterosexually infected in New Zealand in 2016. This showed that 3 (27%) had a CD4 count of ≥ 500 , 2 (18%) between 350-499, and 6 (55%) < 350 . The proportion with a CD4 count < 350 , which is considered a late diagnosis, over the years 2014-2016 was higher (50%) than for MSM (30%) in the same time period, indicating more delayed diagnosis in those heterosexually infected.

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 over the last 20 years and only one person diagnosed in 2016 was reported as being infected in this way.

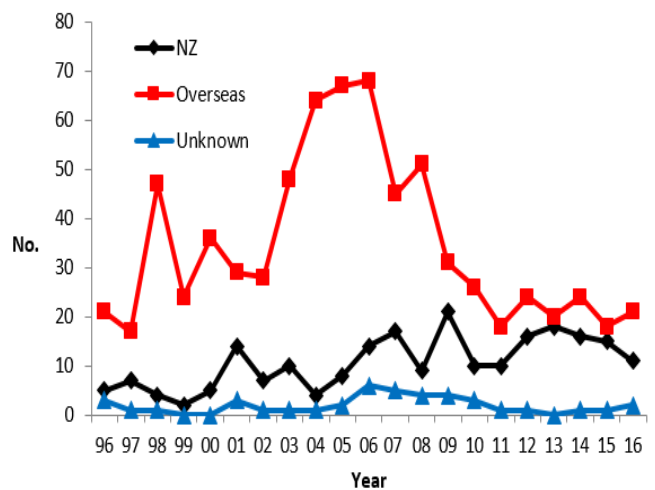


Figure 3: Place of infection of people first diagnosed in New Zealand with heterosexually-acquired HIV by antibody test annually since 1996 and including those reported by viral load testing since 2002

Children infected through mother-to-child transmission

In 2016, no child was diagnosed with HIV infection through mother-to-child transmission in New Zealand. 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 undiagnosed infection born since then or even earlier.

Between 1998 and 2016, there were 166 births to women known to be HIV infected prior to the time of delivery in New Zealand. None of these children have been infected with HIV. However, for 17 children born since mid-2015 it is too soon to be sure about this as acquired HIV cannot be definitively ruled out until a child is over one year old.

In 2016, two women were 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.

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 2278 adults (1898 men, 380 women) and 16 children receiving subsidised antiretroviral therapy (ART) at the end of June 2016. This is 219 more adults (199 men and 20 women) and seven fewer children compared with a year earlier.

Based on the assumptions that: (a) the number on ART increased to the end of 2016 at the same rate as in the previous year; (b) 80% of people with HIV have been diagnosed and are under specialist care; and (c) 85% of people with HIV who are under specialist care are on ARTs, there are estimated to have been around 3500 people with HIV in New Zealand at the end of 2016. This equates to a prevalence of approximately 77 per 100,000 total population.

AIDS Notifications – 2016

Overall 23 people (20 men, 3 women) were notified with AIDS in 2016, compared to nine people in 2015. Of the 23, 16 (70%) were MSM, 4 (17%) were infected heterosexually, 2 men (9%) were infected by either sex with another man or injecting drug use, and for one person (4%) the means of transmission was not reported.

Twelve (52%) were of European ethnicity, 4 (18%) Māori, 6 (26%) Asian, and 1 (4%) Pacific Islander. Sixteen people 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 notifications of AIDS by year of diagnosis and the number of deaths of people who had been notified with AIDS.

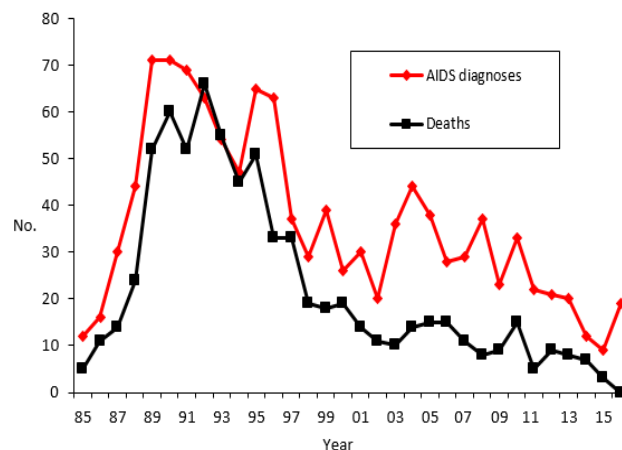


Figure 4: Annual number of diagnoses of AIDS and deaths among people notified with AIDS (The number of notifications and deaths for 2016 are expected to rise due to delayed reports)

Summary of HIV diagnoses in New Zealand

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

Making up 65% of all HIV diagnoses in 2016, gay, bisexual and other men who have sex with men (MSM) remain the most affected by HIV infection in New Zealand. The number of these men infected within New Zealand was relatively stable over the years 2005 to 2013 but increased in 2014 and this increase has continued in 2015 and 2016 – with 2016 having the highest number of MSM ever diagnosed in any one year. 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 into 2015 and 2016. This suggests a true increase in incidence of HIV infection in recent years.

This increase in incidence suggests that continued, focused action on HIV prevention in MSM in New Zealand is required. This should involve the implementation of a comprehensive HIV prevention programme that includes:

- Sustained promotion of condoms as the most effective barrier to HIV and other sexually transmitted infections (STIs) at the population level
- Increased access to culturally appropriate and accessible HIV testing to reduce rates of undiagnosed HIV infection
- Early commencement of HIV antiretroviral treatment (ART) upon diagnosis and ongoing retention in HIV care
- Access to comprehensive vaccination, screening, and treatment for other STIs, which increase the risk of acquisition and transmission of HIV
- Consideration of other possible prevention strategies that are internationally known to be effective – such as pre-exposure prophylaxis for HIV-negative individuals who are at highest risk of HIV infection.

Heterosexual men and women

The number diagnosed with heterosexually acquired HIV has declined since the peak in 2006, and has remained relatively stable, with low numbers since 2010. The number reported to be infected in New Zealand is similar to the number diagnosed here but thought to be infected overseas.

Compared with MSM, a higher proportion of those heterosexually infected have a low CD4 count at the time of diagnosis which is an indication of prolonged undiagnosed infection. It is important to consider strategies to encourage early testing amongst heterosexual men and women particularly if they have been at risk of HIV or have symptoms of HIV infection.

People who inject drugs (PWID)

The continued small number of HIV diagnosis among people who inject drugs is an indication of the well-functioning Needle Exchange Programme in New Zealand. HIV prevention needs to continue to be maintained in this high-risk population of injecting drug users.

Children

There have been no children diagnosed with perinatally acquired HIV born in New Zealand since 2007.

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		2004-2015		2016		Total	
Sex	Exposure category	N	%	N	%	N	%	N	%
Male	Homosexual contact	1163	56.1	1278	55.1	159	65.2	2600	56.1
	Homosexual & IDU	26	1.3	24	1.0	5	2.0	55	1.2
	Heterosexual contact	212	10.2	365	15.7	22	9.0	599	13.0
	Injecting drug use	53	2.6	21	1.0	1	0.4	75	1.6
	Blood product recipient	34	1.6	0	0.0	0	0.0	34	0.7
	Transfusion recipient [§]	9	0.4	5	0.2	0	0.0	14	0.3
	Perinatal	13	0.6	26	1.1	0	0.0	39	0.8
	Other	4	0.2	8	0.3	0	0.0	12	0.3
	Unknown	237	11.5	185	8.0	30	12.3	452	9.8
Female	Heterosexual contact	234	11.3	337	14.5	20	8.2	591	12.7
	Injecting drug use	11	0.6	3	0.1	0	0.0	14	0.3
	Transfusion recipient [§]	8	0.4	2	0.1	0	0.0	10	0.2
	Perinatal	11	0.5	9	0.4	0	0.0	20	0.4
	Other	7	0.3	12	0.5	0	0.0	19	0.4
	Unknown	24	1.2	40	1.7	7	2.9	71	1.5
Transgender	Total	8	0.4	6	0.3	0	0.0	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
TOTAL		2072	100.0	2321	100.0	244	100.0	4637	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[‡] 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		2004-2015		2016		Total	
Sex	Ethnicity	N	%	N	%	N	%	N	%
Male	European	514	50.0	1060	45.7	113	46.3	1687	47.0
	Māori †	60	5.8	162	7.0	17	7.0	239	6.7
	Pacific Islander	19	1.9	64	2.7	7	3.0	90	2.5
	African	96	9.3	166	7.2	3	1.2	265	7.4
	Asian	91	8.8	243	10.5	43	17.6	377	10.5
	Other	19	1.9	117	5.0	11	4.5	147	4.1
	Unknown	20	2.0	100	4.3	23	9.4	143	3.9
Female	European	53	5.2	75	3.2	6	2.5	134	3.7
	Māori †	7	0.7	22	1.0	1	0.4	30	1.0
	Pacific Islander	13	1.3	23	1.0	1	0.4	37	1.0
	African	88	8.6	182	7.8	3	1.2	273	7.6
	Asian	44	4.3	66	2.8	11	4.5	121	3.3
	Other	1	0.1	18	0.8	0	0.0	19	0.5
	Unknown	1	0.	17	0.7	5	2.0	23	0.6
Transgender	Total	1	0.1	6	0.3	0	0.0	7	0.2
TOTAL		1027	100.0	2321	100.0	244	100.0	3592	100.0

[‡] 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 surveillance of HIV/AIDS in New Zealand, contact:
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