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AIDS – New Zealand

HIV INFECTION AND AIDS IN NEW ZEALAND – JANUARY TO JUNE 2007

HIV INFECTION

- 84 people were newly diagnosed with HIV through antibody testing.
- 40 were men infected through sex with men, 30 were people infected through heterosexual contact, 4 were children infected through perinatal transmission (1 in New Zealand in 2004 and 3 overseas), for 2 people information is yet to be received and for 8 people the mode of infection was unknown.
- A further 21 people with HIV infection, who had not had an antibody test here, had their first viral load test in New Zealand in this period. These were mostly people who had been previously diagnosed overseas.

AIDS

- 11 people were notified with AIDS.
- 5 were men infected through sex with men, 5 were men infected through heterosexual contact and 1 man was infected through injecting drug use.

THE LINK BETWEEN HIV AND OTHER SEXUALLY TRANSMITTED INFECTIONS

There is a close relationship between the spread of HIV and other sexually transmitted infections (STIs). Not only are the risks similar, but also the presence of other STIs may facilitate HIV spread.

Increase in diagnoses of syphilis and other STIs in New Zealand

New Zealand has seen an increase in diagnoses of syphilis and many other STIs at sexual health clinics in recent years (ESR. Sexually Transmitted Infections in New Zealand. Annual Surveillance Report 2006).

The number of cases of infectious syphilis in sexual health clinics increased by 45% between 2002 and 2006 (Figure 1). The majority of cases occurred in the Auckland and Wellington regions. Two recent studies from these cities have explored the outbreaks in detail.

In the Auckland Sexual Health Service, there were 40 cases of syphilis from January 2002 to September 2004, more than twice the number in the preceding four years (Azariah S. NZ Med J. 2005; 118 (1211). Of these 40 people affected, 33 were men and 7 were women. Of the 33 men, 18 were men who had had sex with other men (MSM) of whom 6 (33%) were believed to have acquired syphilis overseas. In contrast, of the 22 heterosexually acquired infections (15 men and 7 women), 13 (59%) were believed to have been infected overseas.

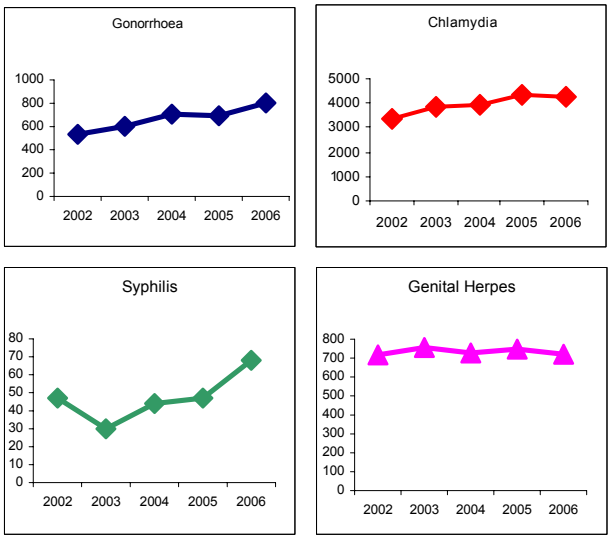

Figure 1 Number of cases of gonorrhoea, chlamydia, syphilis and genital herpes at sexual health clinics from 2002 to 2006 (note different scales on y-axes)

The Wellington study was not limited to sexual health clinic attenders. The number of diagnoses of syphilis rose from 5 in 2004, to 10 in 2005, and 15 in 2006 (Cunningham R, MacDonald J, McLean M, Shaw C. NZ Med J. 2007; 120:1260). The majority (80%) of the infections were among men who had sex with men, mostly aged 30 to 49 years.

Of the other STIs, genital chlamydial infection is the most commonly diagnosed in New Zealand. The group with the highest number of diagnoses of chlamydial infection among sexual health clinic attenders in 2006 were young women under the age of 20. Overall, the number of cases reported by sexual health clinics increased by 27% from 2002 to 2006 - a trend that was supported by a 43% increase in the number of laboratory diagnoses of chlamydial infection in the areas of New Zealand where laboratory surveillance is undertaken.

The number of cases of gonorrhoea diagnosed at sexual health clinics went up by more than 50% from 528 in 2002 to 803 in 2006. At the Auckland Sexual Health Service, of the 204 cases of gonorrhoea, 126 (62%) were among men, and disproportionately affected those of Māori or Pacific ethnicity (Azariah S, Perkins N. NZ Med J. 2007; 120: ***1252***).

The number of new diagnoses of genital herpes at sexual health clinics fluctuated slightly between 2002 and 2006. These figures, however, do not show the true number attending with genital herpes as only about 20% of those affected have recognised symptoms. Data from the Dunedin Multidisciplinary Health and Development Study shows that by age 32 years nearly one in five of the sample had been infected with herpes simplex type 2 infection, the commonest cause of genital herpes (Dickson NP *et al*. Sexually Transmitted Infections, 2007;83:87–90).

Overseas trends in STIs among men who have sex with men

The recent rise in the number of cases of syphilis in New Zealand is similar to the well documented resurgence among MSM in North America and Western Europe (Fenton KA, Imrie J. Infect Dis Clin North Am 2005;19::311-31). Although less publicised, similar rises have occurred among MSM of other more common STIs such as chlamydial and gonococcal infections. There has also been a re-emergence of previously very rare infections - such as lymphogranuloma venereum (LGV).

The increases in STIs among MSM internationally have been seen across many geographic regions, and are probably being driven by similar social phenomena and contexts, including the use of the internet. They may be "a marker of changes in attitudes, risk behaviours, and more general sexual health in many gay communities"(Fenton KA, Wasserheit JN. Sexually Transmitted Disease 2007; 34: 162-5).

Impact of other STIs on HIV transmission

There is now clear evidence of a relationship between the risk of sexual transmission of HIV and other "classic" STIs – syphilis, genital herpes, genital chlamydial and gonococcal infection.

In general, a person infected with HIV is more likely to pass on HIV to his or her sexual contacts if also infected with another STI. This appears to be true for both those STIs that cause genital ulcer disease – most commonly genital herpes and syphilis – and also for those that result in inflammation without ulcers – such as gonococcal and chlamydial infections. Similarly, an uninfected person tends to be more susceptible to HIV if they have another STI.

This suggests that a population that has a high prevalence of other STIs is likely to have more HIV spread, even if the other risks are similar. This has been found to be the case in a comparative study of HIV in four African cities. (Buvé A. et al. AIDS, 2001:15 (Sup. 4) S127-S131.

STI and HIV control

It is now clear that health promotion programmes for the control of HIV and other STIs should be linked.

The key measure of success is a reduction in incidence of all STIs, that is a drop the rate at which new infections occur. This depends not only on behaviour, but also on the prevalence - the proportion infected at any one time.

One approach to controlling the incidence of an STI is therefore to reduce the prevalence. This can potentially be achieved for the bacterial STIs such as syphilis, and chlamydial and gonococcal infections by diagnosis and treatment with antibiotics. However, to actually do so, the rate at which infections are diagnosed and treated must exceed the number of new cases occurring. As many STIs can exist without symptoms, this will not be possible by relying solely on testing and treating those seeking care, but will also require strategies to diagnose and treat asymptomatic people. This might be through the testing of the sexual contacts of people diagnosed, or more widespread testing in general.

The relationship between HIV and other STIs should also be considered in individual clinical

practice. Most HIV testing occurs in general practice. While the majority of results will be negative, many of the people tested – in spite of counselling – are likely to be involved in continuing HIV risk behaviour. Consideration should be given to testing these people for other STIs at the time of their HIV test. Treating STIs will reduce the risk of HIV acquisition and transmission.

STI surveillance

Good surveillance of the incidence and prevalence of STIs provides information vital to inform public health measures for control. Ideally this should provide information on which groups in the population are at risk. Currently STI surveillance of the major STIs is based on people diagnosed at sexual health clinics, which in some regions is supplemented by information on laboratory diagnosed chlamydial and gonococcal infections. This provides an indicator of the number of new infections hence the incidence.

Neither of these sources differentiates between rates among those with same sex, as compared to opposite sex partners. In addition, the laboratory data do not include information on ethnicity. Ways that these omissions can be rectified need to be explored.

However, even more comprehensive surveillance of diagnosed STIs will not provide information on the *prevalence* in the population. As previously mentioned this is a key driver of the incidence. Methods are needed to monitor this in the whole, and subgroups in the population.

SURVEILLANCE DATA
HIV AND AIDS IN NEW ZEALAND

HIV

For the first six months of 2007, 84 people (62 males and 22 females) have been found to be infected with HIV through antibody testing. A further 21 people (13 males and 8 females), mostly diagnosed overseas and who had not had an antibody test in New Zealand, had their first viral load test in New Zealand in this period. The annual number of people diagnosed with HIV through antibody testing by means of infection is shown Figure 2.

AIDS

Eleven people, all males, were notified with AIDS in the first half of 2007. Five of these 11 were MSM, five were infected through heterosexual contact and one through injecting drug use.

The total number of people notified with AIDS to the end of June 2007 is 931 (842 males and 89 females). Overall 679 (73%) were men infected through sex with men, 158 (17%) were men and women infected through heterosexual contact, 20 (2%) through injecting drug use, 20 (2%) as a result of a blood product or transfusion, 14 (1.5%) through mother to child transmission, and for 40 (4%) the mode of transmission remains unknown.

Of the 931 people notified with AIDS, 664 (71%) were European; 100 (11%) Māori; 29 (3%) Pacific people; and 53 (6%) African; 53 (6%) Asian; 25 (3%) of other ethnicity and for 7 (1%) information on their ethnicity was not provided.

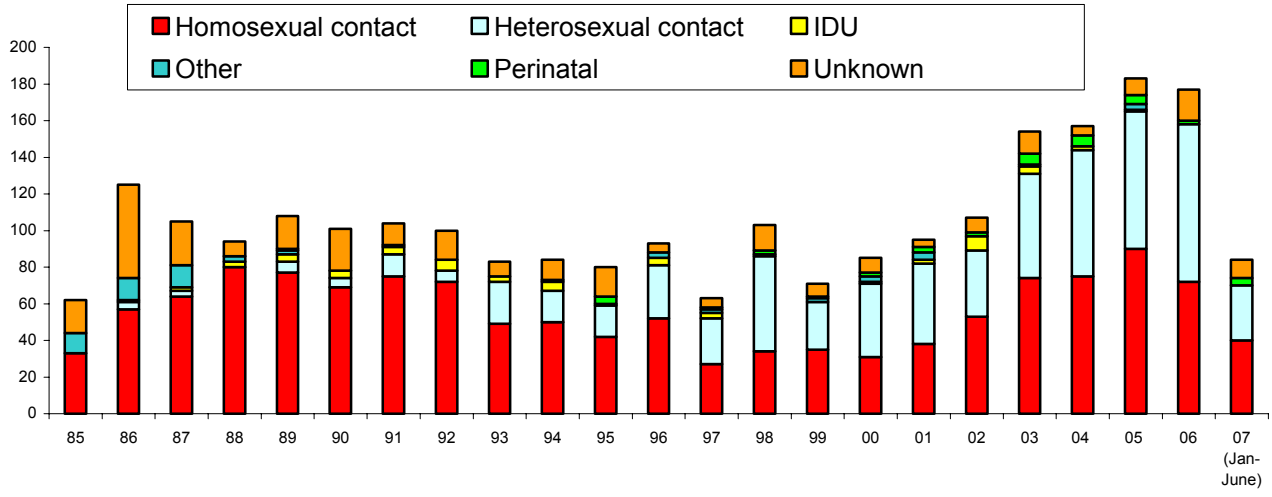

Figure 2 Number of people diagnosed with HIV in New Zealand through antibody testing[1] by year of diagnosis[2] and means of infection.

[1] Viral load testing has been available in New Zealand since 1996. Only the trends in those diagnosed through antibody testing have been shown in this figure as this has been available for the whole period.

[2] Infection might have occurred some time before diagnosis.

Table 1. Exposure category by time of diagnosis for those found to be infected with HIV by antibody test or first viral load test. (A small number of transsexuals are included with the males)

		HIV Infection*									
		1985-1995		1996-2005		2006		2007 (to end of June)		Total	
Exposure	**Sex**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Homosexual contact	Male	655	62.6	708	49.6	88	43.1	44	41.9	1495	53.7
Homosexual & IDU	Male	13	1.2	21	1.5	2	1.0	1	0.9	37	1.3
Heterosexual contact	Male	33	3.1	256	17.9	42	20.6	15	14.3	346	12.4
	Female	60	5.7	251	17.6	48	23.5	23	21.9	382	13.7
Injecting drug use (IDU)	Male	27	2.6	29	2.0	0	0.0	0	0.0	56	2.0
	Female	7	0.7	4	0.3	0	0.0	0	0.0	11	0.4
Blood product recipient	Male	28	2.7	6	0.4	0	0.0	0	0.0	34	1.2
Transfusion recipient§	Male	2	0.2	8	0.6	0	0.0	0	0.0	10	0.4
	Female	5	0.5	4	0.3	0	0.0	0	0.0	9	0.3
	NS	5	0.5	0	0.0	0	0.0	0	0.0	5	0.2
Perinatal	Male	4	0.4	18	1.3	1	0.5	2	1.9	25	0.9
	Female	2	0.2	12	0.8	1	0.5	2	1.9	17	0.6
Other	Male	0	0.0	6	0.4	0	0.0	0	0.0	6	0.2
	Female	1	0.1	8	0.6	0	0.0	0	0.0	9	0.3
Awaiting information/ undetermined	Male	179	17.1	80	5.6	15	7.3	13	12.4	287	10.3
	Female	13	1.2	15	1.0	7	3.4	5	4.8	40	1.4
	NS	13	1.2	0	0.0	0	0.0	0	0.0	13	0.5
TOTAL		1047	100.0	1426	100.0	204	100.0	105	100.0	2782	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, acquired overseas

Table 2. Ethnicity‡ by time of diagnosis in New Zealand for those found to be infected with HIV by antibody test or first viral load test since 1996. (A small number of transsexuals are included with the males)

		HIV Infection*									
		1996-2000		2001-2005		2006		2007 (to end of June)		Total	
Ethnicity	**Sex**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
European/ Pakeha	Male	303	51.7	385	45.8	76	37.2	38	36.2	802	46.2
	Female	31	5.3	32	3.8	6	2.9	5	4.8	74	4.3
Māori†	Male	34	5.8	50	5.9	10	4.9	11	10.5	105	6.0
	Female	5	0.8	5	0.6	3	1.5	1	0.9	14	0.8
Pacific Island	Male	7	1.2	23	2.7	6	2.9	1	0.9	37	2.1
	Female	8	1.4	7	0.8	2	1.0	2	1.9	19	1.1
African	Male	63	10.7	93	11.1	27	13.2	8	7.6	191	11.0
	Female	47	8.0	93	11.1	35	17.1	17	16.2	192	11.0
Asian	Male	41	7.0	76	9.0	19	9.3	10	9.5	146	8.4
	Female	19	3.2	41	4.9	3	1.5	1	0.9	64	3.7
Other	Male	9	1.5	20	2.4	4	2.0	2	1.9	35	2.0
	Female	0	0.0	3	0.4	4	2.0	2	1.9	9	0.5
Undetermined	Male	18	3.1	10	1.2	6	2.9	5	4.8	39	2.2
	Female	1	0.2	2	0.2	3	1.5	2	1.9	8	0.5
TOTAL		586	100.0	840	100.0	204	100.0	105	100.0	1735	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.

‡ Information on ethnicity of people diagnosed with HIV only collected since 1996

† 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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