

**HIV/ AIDS**  
**In**  
**Saskatchewan**

**2007**

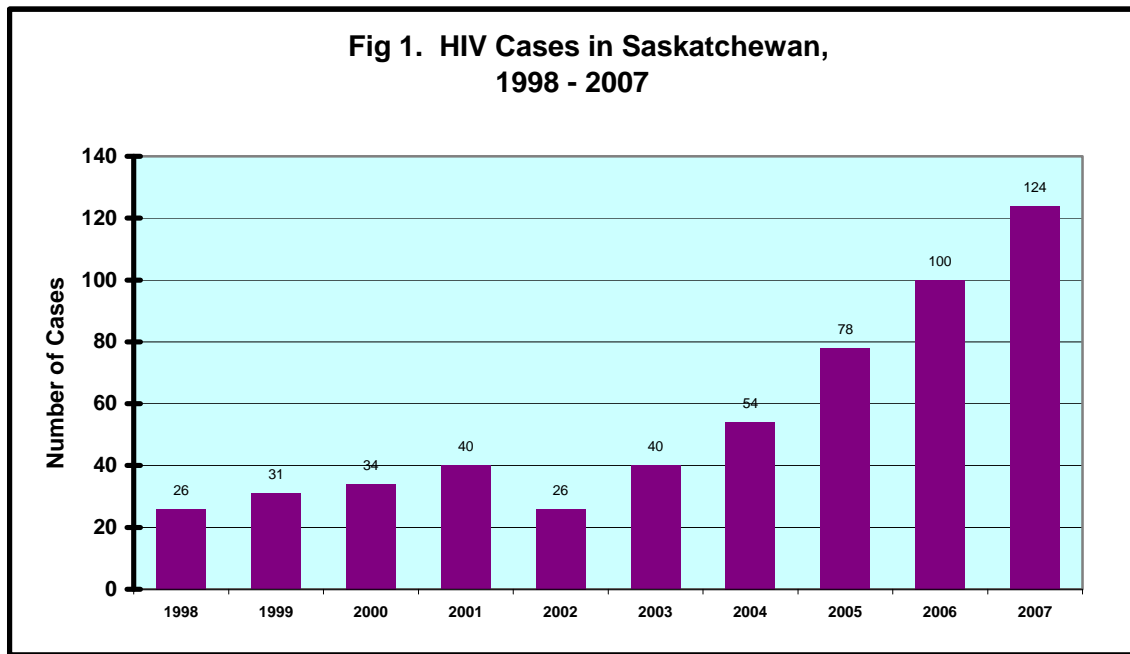
**Saskatchewan Health  
Population Health Branch**

## HIV/AIDS in Saskatchewan, 2007

This epidemiological report, HIV and AIDS in Saskatchewan, 2007, builds on the recently published 2006 HIV and AIDS report which provides a historical trend analysis of the disease over the past ten years. This report profiles HIV infections and AIDS in Saskatchewan to the end of December, 2007.

### HIV morbidity

One hundred twenty-four (124) laboratory-confirmed HIV cases were reported during 2007 compared to 100 in 2006, 78 in 2005, 54 in 2004, and 40 in 2003. There was a total of 553 HIV infected individuals identified in the 10 years, 1998 to 2007. Because of the small number of reported cases of HIV, crude rates for HIV in Saskatchewan fluctuate widely from year to year and therefore are not displayed. The increase of approximately 25 newly diagnosed cases in each of the past four years reflects public health efforts to identify cases early and establish early interventions such as treatment and education to curtail an exponential increase in cases (Fig 1).



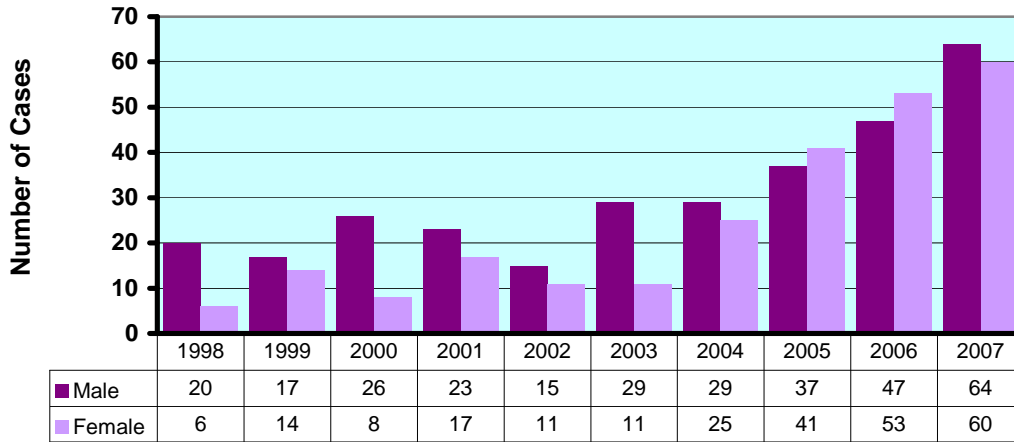
Close to three-quarters (72%) of total HIV cases in 2007 were residents in the health regions containing the urban centres of Saskatoon and Regina.

The year of diagnosis does not necessarily reflect the year a person became infected with HIV and it is not always possible to determine when a person became infected.

### HIV Morbidity – *age and gender*

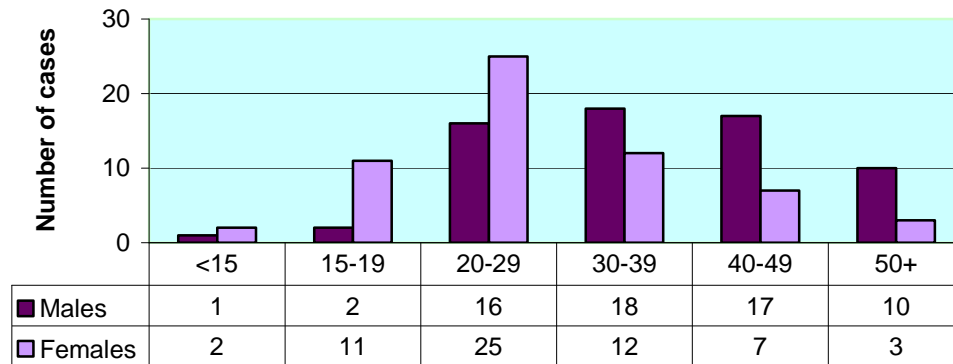
In 2007, as in 2006, there was an equal split between the case genders, 60 females (48%) and 64 male HIV cases (Fig. 2).

**Fig 2. HIV Cases in Saskatchewan By Gender, 1998 - 2007**

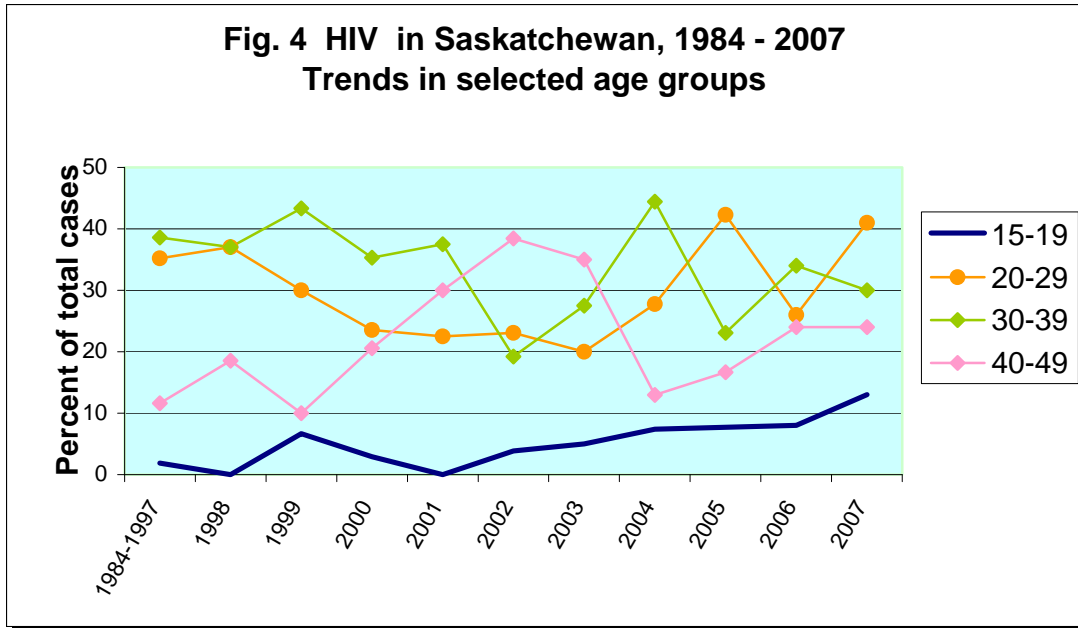


In 2004 the number of female cases began to increase, surpassing the number of male cases in 2005 and 2006. In 2007, the trend reversed slightly but female cases still exceeded male cases in the younger age groups 15-19 years (11 female versus 2 male cases) and 20-29 years (25 female versus 16 male cases). (Fig. 3)

**Fig 3. HIV in Saskatchewan, by age and gender, 2007**



The percentage of HIV infected individuals in age groups 20 years and older has fluctuated widely since 1984. Of note is the steady upward trend in percentage of youth between 15-19 years beginning in 2001. (Fig. 4)



Sixty-six percent (201) of the 306 female HIV cases reported since 1984 have been identified in the past six years. This could reflect in part females accessing care and testing more readily than males. However, it more likely reflects an increasing number of young females engaging in the sex-drug trade industry.

#### **HIV morbidity – ethnicity profile**

Ethnicity data is important as it further characterizes populations to support targeted program planning and resource allocation. Fifty one percent (63 cases) were of non-Aboriginal ethnicity, that is 22 Caucasian, three Black and one Asian. Forty-nine percent (61 of 124 cases) of HIV cases in 2007 were of Aboriginal origin. This compares to 60% in 2006 and 68% in 1999. Ethnicity was not recorded for 33 (27%) of 2007 HIV cases.

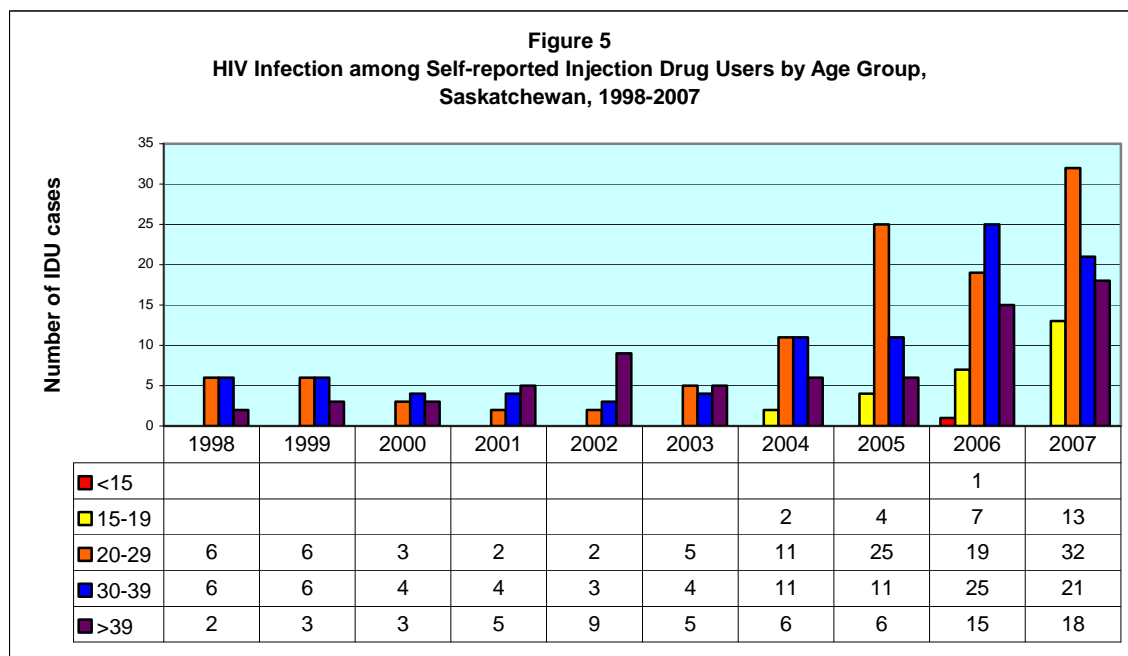
Sixty percent of females (36 of 60 cases) in 2006 were Aboriginal compared to 39% of males (25 of 64 cases). The Caucasian group comprised twenty-two of the 63 non-Aboriginal cases in 2007 including four females. One male and two female cases comprised those cases of Black ethnicity.

Eleven of the thirteen HIV cases in the 15-19 year age group were Aboriginal females diagnosed in 2007. Sixty-six percent (27 of 41 cases) in the 20-29 age group were of Aboriginal ethnicity. Sixteen of the 27 cases in this age group were female. Ten Aboriginal cases (five female cases) comprised the 30 cases in the 30-39 age group compared to six Caucasian and 12 with no ethnicity reported.

### HIV morbidity – self reported risk exposure to infection

The categories of risk exposures in this report indicate the most likely reason for acquiring HIV infection. In the early years of HIV/AIDS notification, risk exposure was often not known or was not reported consistently. Risk exposure information is self-disclosed by the client.

Injection drug use (IDU) remains one of the major risk exposures reported by HIV infected cases. The incidence of 84 cases reporting injection drug use in 2007 is almost a 25% increase over the 67 cases reported in 2006. Forty-one males and 43 females reported this risk exposure. Sixty-three (63%) of the 84 cases self-disclosing injection drug use also self-identified as Aboriginal. Thirty-one of the sixty-three cases were female.



Over half (52%) of HIV infected injection drug users in 2007 were between 15-29 years of age with another one-quarter in the 30-39 year age group. Thirteen of 84 cases (16%) were 15-19 years (11 females), thirty of 84 cases (36%) were 20-29 years (19 females) and 20 of 84 cases were 30-39 years (9 females). (Fig 5)

The number of male cases whose primary risk exposure for HIV infection was engaging in sex with other men declined from 14 of 17 cases (82%) in 1991 to one of 26 cases (4%) in 2002. However, in 2003 the cases in this risk exposure category jumped to 12 out of 40 cases (30%). Increased testing in this population, resulting from a heightened awareness of those health risks, may account in part for the large number of identified cases in this population. This increase did not continue into 2006 when only four cases (9%) self-identified this risk. In 2007, eleven men (9%) reported this risk. Four of these also reported injecting drugs.

Heterosexual exposure is acquired through sexual relations with a known HIV positive partner or with a partner from a country where HIV infection is endemic, or where the case has had heterosexual relations and no other identifiable risk exposure for HIV. Trends in heterosexual exposure continue to fluctuate with an average of nine cases since 1999. The fourteen cases (11% of all cases) reported in 2007 are in keeping with this trend.

No HIV cases having ever lived or originated from a country where HIV and AIDS is endemic were identified in 2007.

Increasingly, prenatal HIV testing is being offered to all pregnant women, not only to pregnant women with identified risks for exposure to HIV. Infants born to HIV infected mothers are tested postnatally on a scheduled basis to determine if perinatal transfer has taken place. A child whose test remains positive at 18 months is considered an HIV positive case. Seven children born between 1987 and 1997 were infected at birth through perinatal transfer of the HIV virus. Five of these were born to women from endemic countries who did not declare or were unaware of their HIV positive status at the time of giving birth. Two infants were born of infected mothers in 2005. Three cases of perinatal transfer were reported among children born in 2007. These most recently infected infants were born to women infected in this province.

None of the HIV cases reported between 2000 and 2007 had a history of receiving a blood transfusion or blood product.

### **HIV - lab testing**

Of the 440,332 specimens submitted to the Saskatchewan Disease Control Laboratory since testing for HIV began in late 1984, 817 individuals resident in Saskatchewan (0.19%) have tested positive for the antibody. Between 24 and 54 individuals test positive for the first time each year in the past ten years.

The annual number of specimens tested has risen steadily from 3,319 in 1989 to 44,779 in 2007. The proportion of positive specimens, though small, has doubled to 0.28% from 0.13% in 2005. The increase in testing reflects a growing awareness of the need for testing following potential exposure to HIV and the accessibility to testing facilities. Requirements for organ transplant screening and immigration applications also account in part for the increase in test requests.

**Table 1 – Positive HIV Antibody Testing in Saskatchewan, 1984 – 2006**

<b>YEAR</b>	<b># Individual Tested</b>	<b>Positive Individuals</b>	<b>% Positive Specimens</b>
<b>1984-92</b>	34,128	126	0.37%
<b>1993</b>	13,390	17	0.13%
<b>1994</b>	17,814	26	0.15%
<b>1995</b>	16,100	28	0.17%
<b>1996</b>	17,883	24	0.13%
<b>1997</b>	29,664	43	0.14%
<b>1998</b>	22,015	26	0.12%
<b>1999</b>	20,827	31	0.15%
<b>2000</b>	21,954	34	0.15%
<b>2001</b>	25,067	40	0.16%
<b>2002</b>	26,341	26	0.10%
<b>2003</b>	30,137	40	0.13%
<b>2004</b>	36,778	54	0.15%
<b>2005</b>	40,500	78	0.13%
<b>2006</b>	42,955	100	0.23%
<b>2007</b>	44,779	124	0.28%
<b>TOTAL</b>	<b>440,332</b>	<b>817</b>	<b>0.19%</b>

**HIV mortality**

Of the 817 HIV individuals diagnosed in Saskatchewan since 1984 approximately 160 are presumed to be still alive. This includes those whose infection has progressed to AIDS.

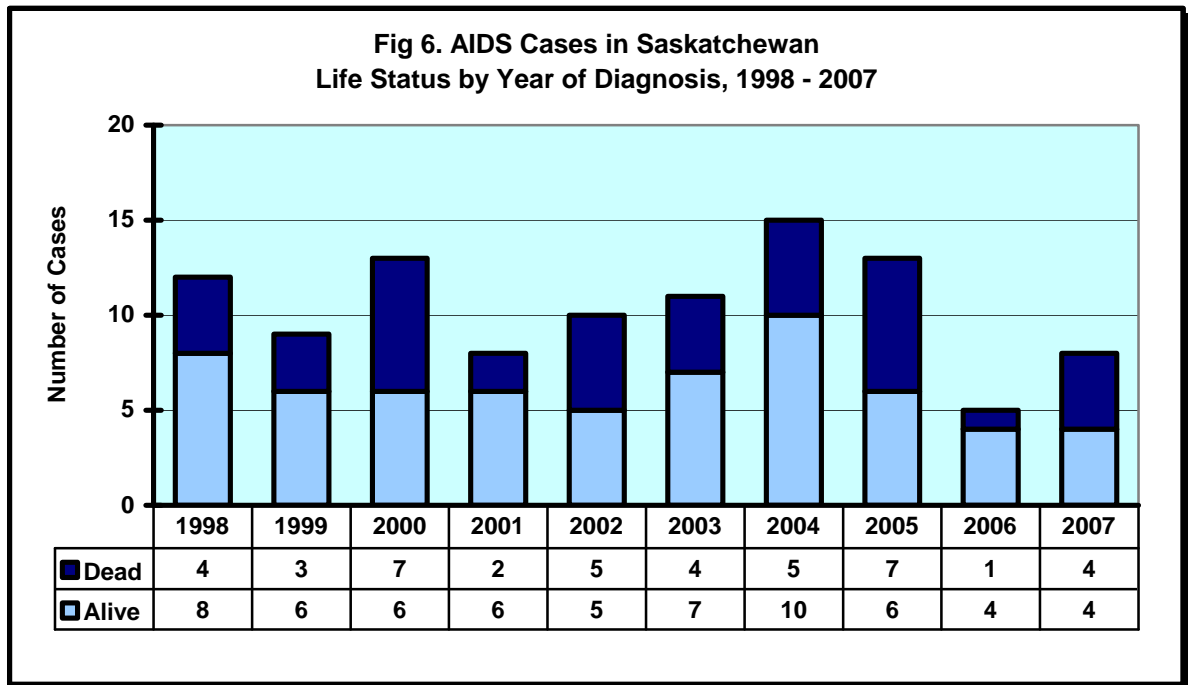
**HIV morbidity – highlights of the national profile**

HIV infection is notifiable in all provinces and territories in Canada. The number of HIV positive individuals reported annually to the Public Health Agency of Canada has increased steadily. At the end of December, 2007, 64,800 reports had been received though a small proportion of these would be counted two or more times as the client moves among jurisdictions. Just over 500 of these (517) were under 15 years of age. Of the 2,432 positive HIV tests in 2007, 592 (24%) were women, a notable increase from the years prior to 1995 where they represented less than 10% of the cases. The largest rise in this proportion is seen among the 15-29 year age group where females represented 17% of reports in 1985-1999 and 36% in 2007. Unlike Saskatchewan where injection drug use accounts for 68% of total 2007 cases, 23% of total cases nationally self-disclosed injection drug use. Men having sex with men represented 43% of total cases nationally compared to 9% of total cases in Saskatchewan in 2007. [source: HIV and AIDS Surveillance Report to December 31, 2007, PHAC,]

**AIDS morbidity and mortality**

Two hundred and forty-one (241) cases of AIDS comprising 199 males and 42 females have been reported since notifications were first received in 1984. The annual incidence pattern is erratic and does not necessarily reflect the year in which the client was infected but rather the year in which he/she first sought health care for their illness and was diagnosed with an AIDS defining illness. With an incubation period of 11 to 15 years, the epidemiological profile of AIDS best describes the pattern of HIV infection approximately one to one and a half decades prior to the trends displayed in the charts accompanying this report.

Eight (8) HIV infected individuals, six males and two females, were diagnosed with an AIDS defining illness in 2007. Half of the cases were under forty years of age, a younger profile than cases diagnosed in previous years. One case was in the 20-29 year age group and three in the 30-39 year age group. Four of these cases, two males and two females, died of their illness in 2007. (Fig 6)



**Technical notes**

Notification of HIV and AIDS cases to the local medical health officer and the Coordinator of Communicable Disease Control, Saskatchewan Health, is mandated by the Disease Control Regulations under the Public Health Act, 1984.

As a result of data cleaning some previously counted cases are removed from the database after being identified as either not meeting the case definition for HIV and AIDS or as being previously reported in Saskatchewan or in another jurisdiction where reporting of HIV is legislated. A small number of cases can be identified only by laboratory specimen number and may be synonymous with another case in the database. Ongoing maintenance of the database may result in records being assigned a different year of diagnosis or risk exposure category as updated information becomes available.

This report is based on the number of HIV and AIDS cases diagnosed by laboratory confirmation while resident in this province. Out-of-province residents testing positive for HIV in Saskatchewan are not counted in provincial statistics nor are residents who tested positive while living in a jurisdiction where HIV was reportable at the time. Several provincial jurisdictions did not require reporting of AIDS when Saskatchewan began surveillance for the syndrome. Some people living with AIDS in Saskatchewan were tested positive in jurisdictions where HIV was non-reportable and are counted among the AIDS cases in this report. Individuals from jurisdictions where HIV was not reportable are attributed to the year when re-testing took place in this province.

Year of HIV has been assigned to cases to the year in which they were first lab confirmed since the date of infection cannot be determined. An exception is infant cases born to infected mothers, assigned by the year of birth. Individuals tested by Citizenship and Immigration Canada as part of the immigration process are not included in this report.

Ethnicity is self-identified. For purposes of this report, Aboriginal persons comprise Inuit, Métis, and Native Indians (i.e. First Nations). The non-Aboriginal classification includes Caucasian, African-Canadian, Latin American, Asian, South Asian and Arabic ethnicity.

Risk exposure information is self-reported. Some individuals disclosed additional risk exposures, however these are deemed to be a less likely source of infection and are not displayed.

The annual data for HIV serology reflects the number of patients tested, with any repeat tests during that year removed. Some may be follow up tests on individuals tested in previous years.

**PREPARED IN NOVEMBER 2008**