



**Saskatchewan
Ministry of Health**

HIV and AIDS

In

Saskatchewan

2008

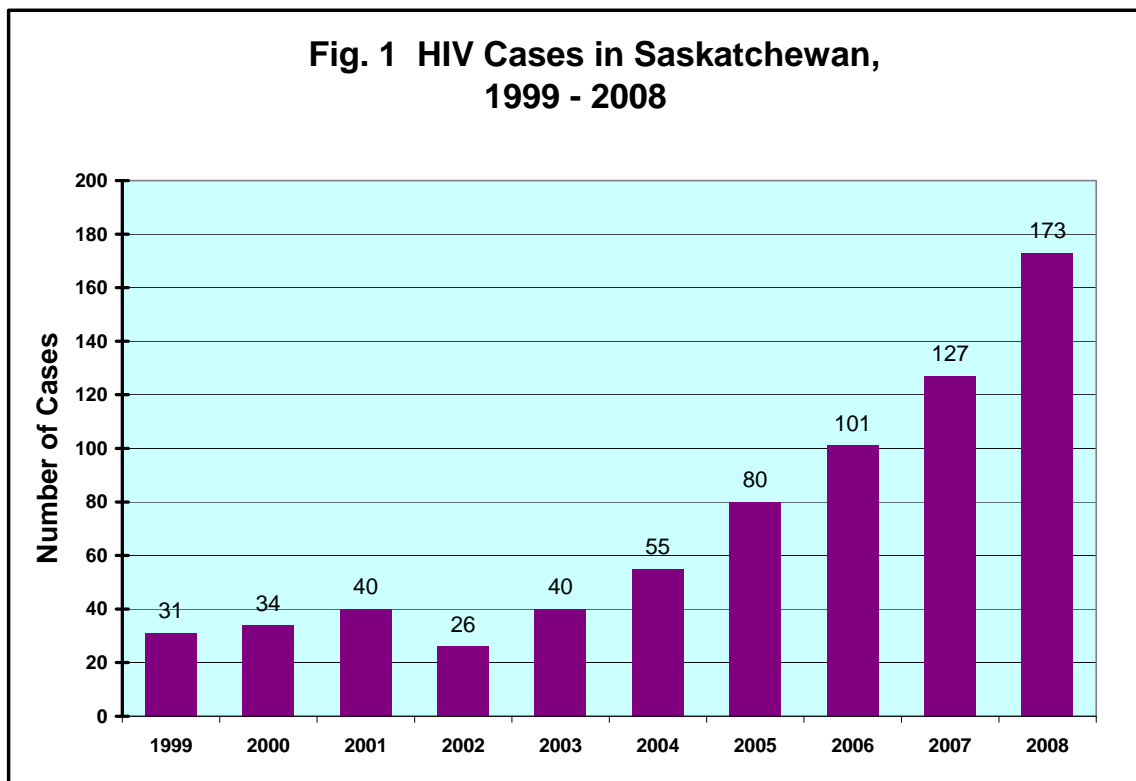
**Saskatchewan Ministry of Health
Population Health Branch**

HIV and AIDS in Saskatchewan to December 31, 2008

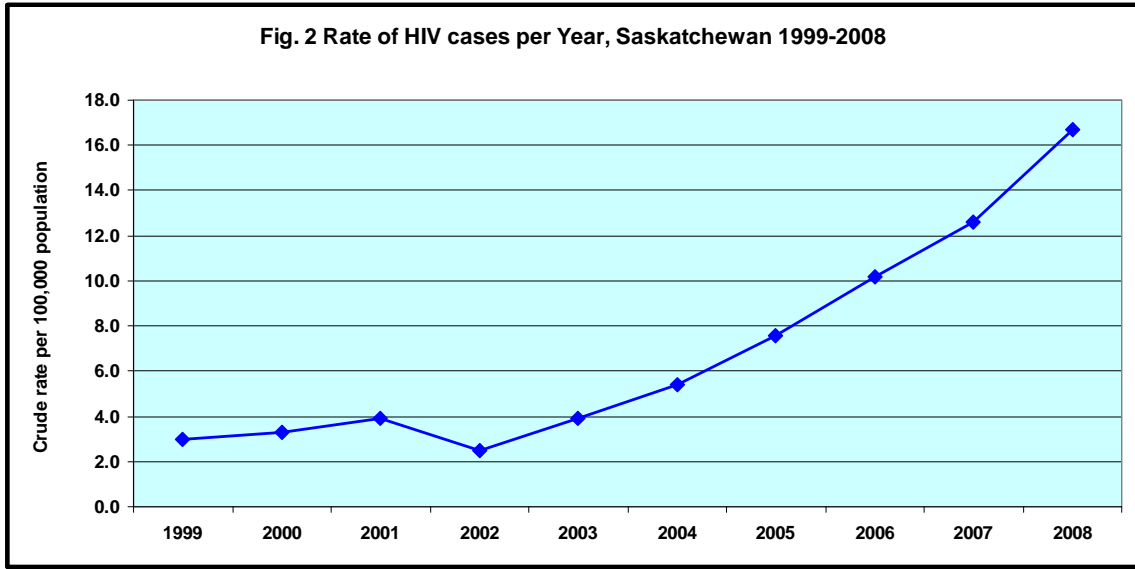
This epidemiological report, HIV and AIDS in Saskatchewan 2008, builds on the recently published 2007 HIV and AIDS report, which provides a historical trend analysis of the disease over the past ten years. This report profiles HIV infections and AIDS in Saskatchewan to the end of December, 2008.

HIV Morbidity

In 2008, 173 laboratory-confirmed HIV cases were reported compared to 127 in 2007, 101 in 2006 and 80 in 2005 (an increase of 36% from 2007). There was a total of 707 HIV infected individuals identified in the 10 years, 1999 to 2008.

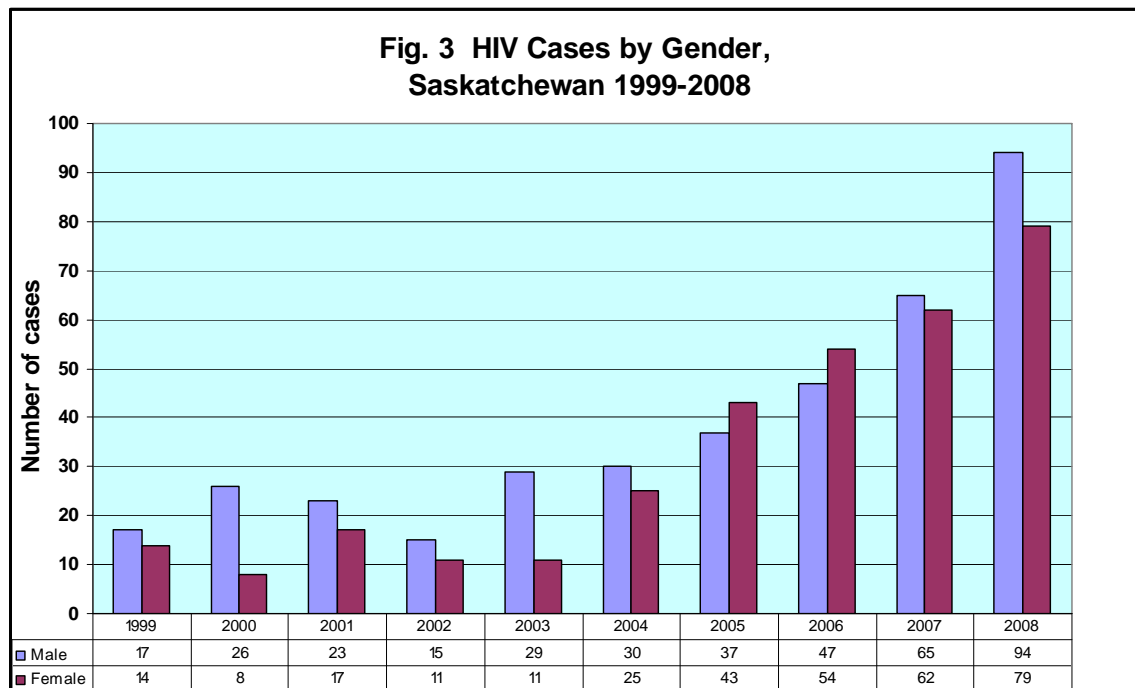


There has been an average increase of approximately 24 cases per year from 2004 to 2007. In 2008, there was an increase of 46 cases from 2007. This may partially reflect public health efforts to identify cases early and establish early interventions such as treatment and education to curtail an exponential increase in cases. Close to three-quarters (72%) of total new HIV cases during the last five years, 2004-2008, were residents in health regions where the urban centres of Saskatoon and Regina are situated. With the increasing number of reported cases of HIV, the annual crude rates for HIV in Saskatchewan do not fluctuate widely as in the earlier years. Since 2002, a steady upward trend has occurred as displayed in Fig. 2.

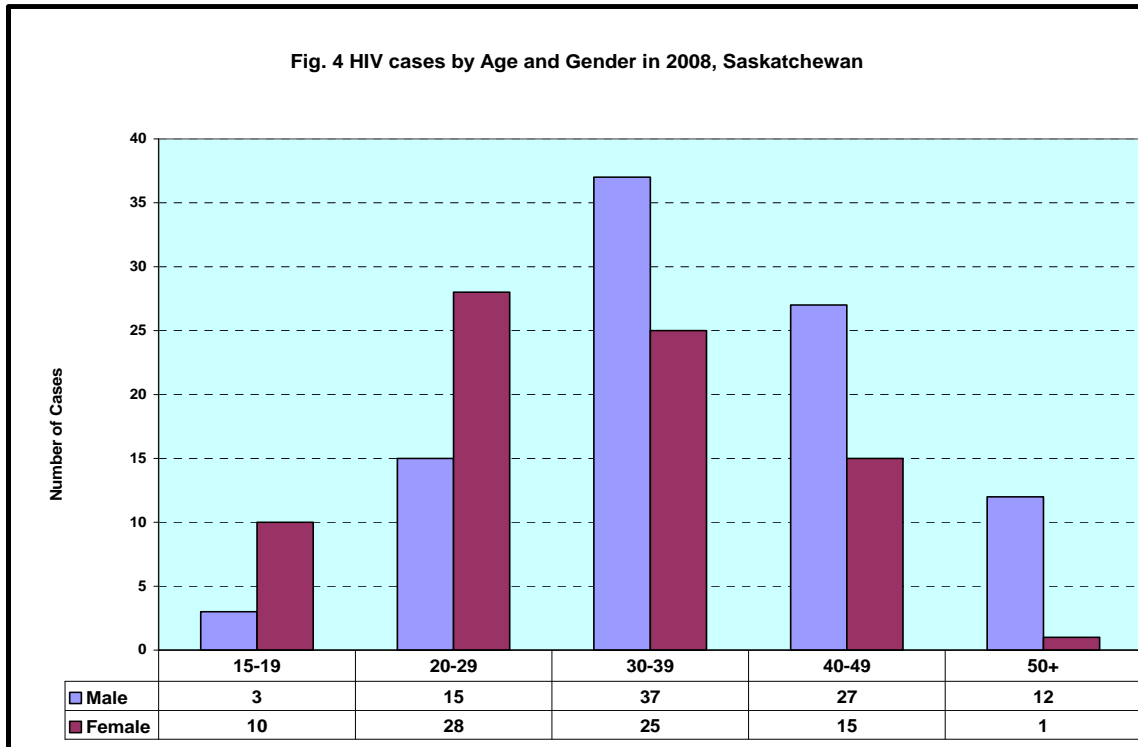


HIV Morbidity – age and gender profile

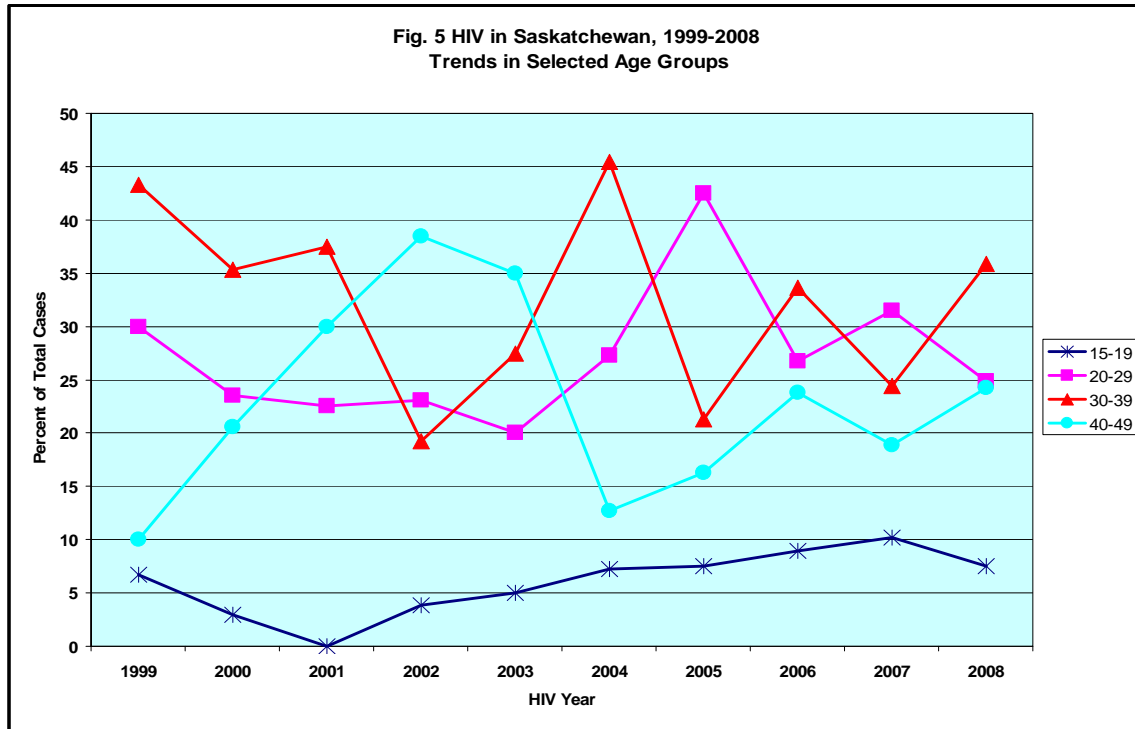
In 2008, there were 79 female (46%) cases and 94 male (54%) HIV cases identified. In 2004, the number of female cases began to increase, surpassing the number of male cases in 2005 and 2006. In 2007 and 2008 this trend reversed (Fig. 3).



However, in 2008, female cases still exceeded male cases in the younger age groups 15-19 years (10 female versus three male cases) and 20-29 years (28 female versus 15 male cases) (Fig. 4).



The percentage of HIV infected individuals in age groups 20 years and older has fluctuated widely since 1984, when the HIV testing and reporting began. Of note is the steady upward trend in percentage of youth between 15-19 years, beginning in 2001 (Fig. 5).



Sixty-eight percent (263 cases) of the 385 female HIV cases reported since 1984 have been identified in the past five years. Eighty-nine percent (40/45) of the all cases in women aged 15-19 years were identified during 1999-2008. Eighty percent (128/160) of all cases in women between 20-29 years were identified in the same ten-year period. This could reflect, in part, females accessing care and testing more readily than males. However, this supports anecdotal reports of the increasing number of young females engaging in the sex-drug economy.

Eighty-three percent of all cases of both genders reported in Saskatchewan since 1984 have been 20-49 years of age at the time diagnosis (where age and sex data are available). In 2008, 85% of cases (147 cases) were included in this age group.

HIV Morbidity – *ethnicity profile*

Ethnicity data is important as it further characterizes populations to support targeted program planning and resource allocation. In 2008, 34 cases were of non-Aboriginal ethnicity. Seventy six percent (132 of 173 cases) were of Aboriginal origin. This compares to 70% in 2006 and 65% in 2007. Ethnicity was not recorded for 4% (seven cases) in 2008 compared to 13% in 2007 (17 of 127 cases).

Eighty-five percent of females (67/79) in 2008 were Aboriginal compared to 69% of males (65 of 94 cases). The remaining females included nine non-Aboriginal females and three females of unknown ethnicity. The remaining males included 25 non-aboriginal males and four of unknown ethnicity.

Ten of the 13 HIV cases diagnosed in 2008 in the 15-19 year age group were Aboriginal females. Eighty-four percent (36/43) in the 20-29 year age group were of Aboriginal ethnicity. Twenty-eight of the 43 cases in this age group were female; 23 cases were of Aboriginal ethnicity. Of the 62 cases comprising the 30-39 year age group, forty-three cases were Aboriginal (19 female cases) compared to 16 cases of non-Aboriginal ethnicity and three where ethnicity was unknown.

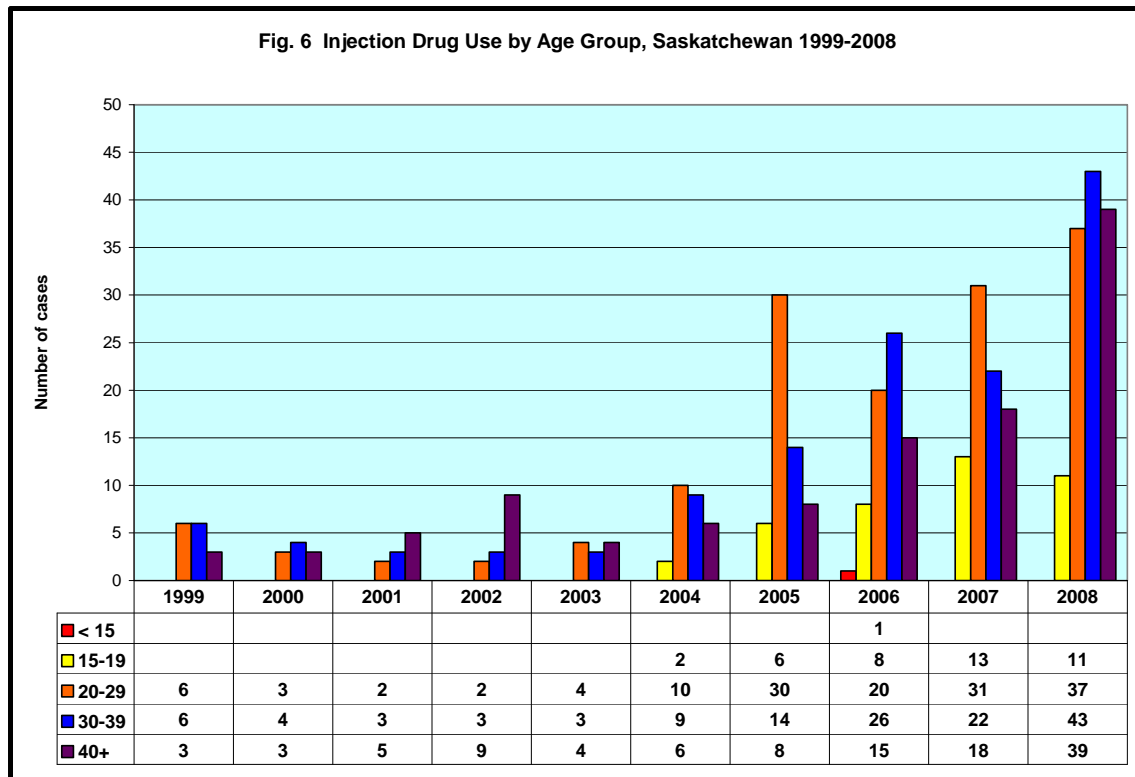
On average, the age of female cases is younger than their male counterparts. This gender difference is more notable among Aboriginal females. The average age of all female cases in 2008 was 30.8 years (range: 15-53 years) compared to that of all male cases which was 37.8 years (range: 16-77 years). The average age of Aboriginal female cases was 30.6 years, with 36% of Aboriginal female cases being 25 years of age or younger, compared to the average age of Aboriginal male cases which was older at 36.4 years (range: 16-77 years). However, only 12% (8 cases) of male Aboriginal cases in 2008 were 25 years of age or younger. The average age of Caucasian female cases was 34.1 years (range: 26-42 years); that of Caucasian male cases was 43.7 years (range: 29-63 years).

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 in the province of Saskatchewan. The 133 cases reporting injection drug use in 2008 represents a 53% increase over the 87 IDU cases reported in 2007. One hundred and nine of the 133 cases who self disclose injection drug use also self-identified as Aboriginal.

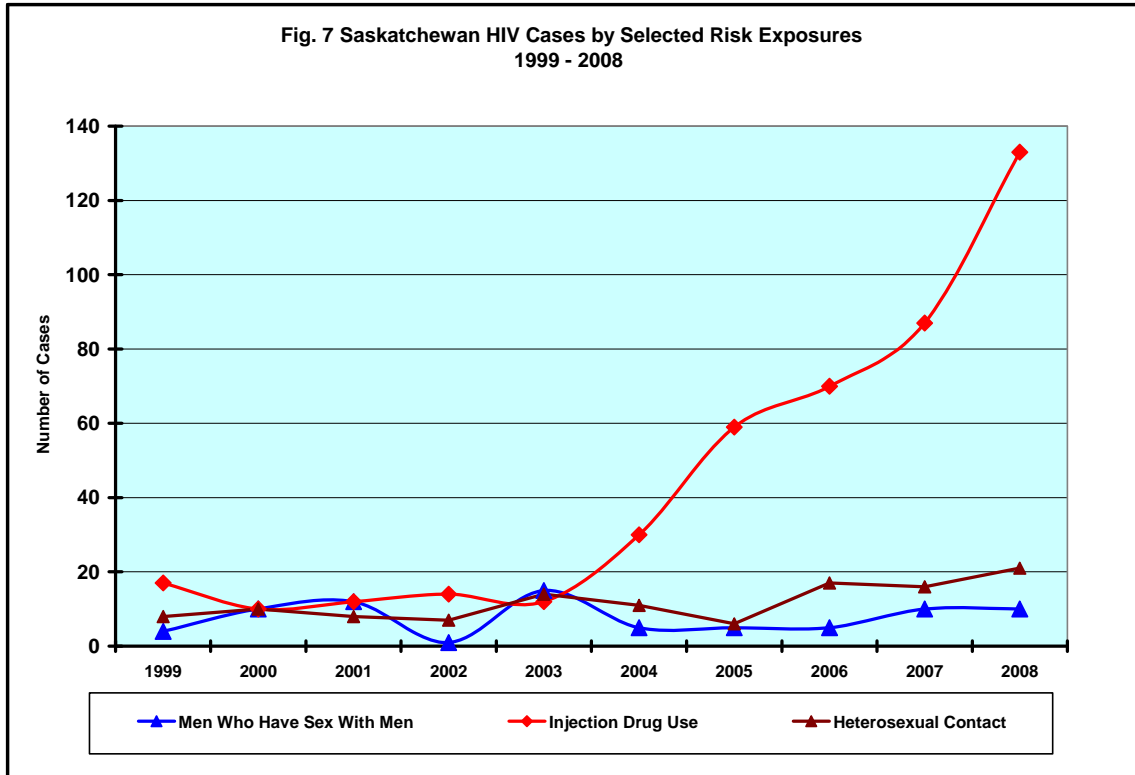
The high proportion of IDU cases determines, to a large extent, the overall demographic profile of HIV in Saskatchewan. In 2008, 48% (64 cases) of IDU cases were female. Over one third (37%) of HIV infected injection drug users in 2008 were between 15-29 years of age with another one-third in the 30-39 year age group. Twelve of 133 IDU cases (9%) were 15-19 years old (9 females), 37 of 133 cases (28%) were 20-29 years old (25 females) and 44 of 133 cases were 30-39 years old (18 females) (Fig 6).



In 2003, the number of male cases whose primary exposure for HIV infection was engaging in sex with other men (MSM) increased to 15 out of 40 cases (38%). This increase did not continue and in 2007 only ten cases (8%) self-identified this risk. In 2008, 10 men (6%) reported this risk exposure. Three of these also reported injecting drugs.

Heterosexual exposure refers to sexual relations with a known or suspected HIV positive partner of the opposite sex or with a partner of the opposite sex from a country where HIV infection is endemic. This category also includes an individual who had only heterosexual relations and reported no other identifiable risk exposure for HIV. The incidence of cases with heterosexual exposure has gradually increased since 2005. In 2005, there were six cases with risk of heterosexual exposure compared to 17 cases in 2006 (12 female), 16 cases (9 female) in 2007. In 2008, 21 cases reported heterosexual activity as the primary risk for acquiring HIV infection, eight were female (Fig. 7).

Endemic risk exposure includes those who were born in a country where HIV is considered endemic, i.e. a country where the predominant means of HIV transmission is heterosexual contact. Between 2006 to 2008 there were six endemic cases of HIV reported in Saskatchewan.



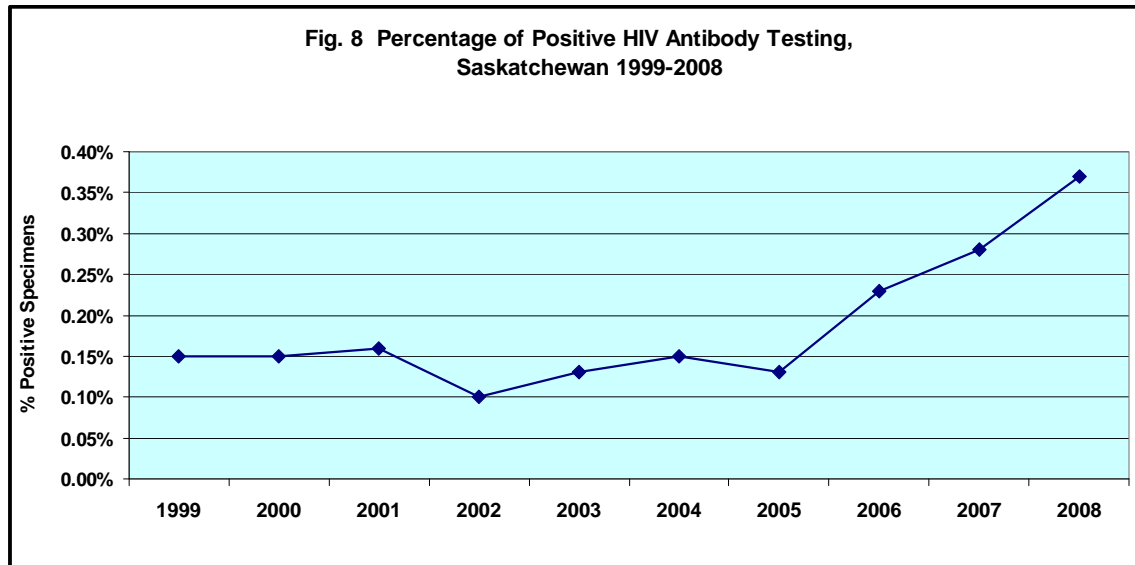
There were no cases of perinatal transmission reported in 2008. There have been eight cases acquiring infection through perinatal transmission since 1997. For these eight cases reported, the women did not receive HIV treatment during pregnancy or delivery. Typical reasons for perinatal cases are: mother's HIV status is unknown, lost to follow up and refusal of treatment. Prior to 1997 seven children were infected at birth through perinatal transfer of HIV. Five of these seven cases were born to women from endemic countries, who did not declare or were unaware of their HIV positive status at the time of delivery. Prenatal HIV testing is being offered routinely to all pregnant women, not just to pregnant women with identified risks for HIV. Prenatal HIV screening has also increased. Infants born to HIV infected mothers are monitored postnatally on a scheduled basis.

Only five cases with no identified risk exposure were reported in 2008. No HIV cases were reported in 2008 as having acquired infection through blood transfusion or blood products.

HIV laboratory testing

The annual number of specimens tested in Saskatchewan has risen steadily from 20,827 in 1999 to 47,294 in 2008. This increase in testing may reflect a growing awareness of the need for testing following potential exposure to HIV. Increased case finding efforts and improved access to testing have also likely contributed to this increase. Requirements for organ transplant screening and immigration applications may partially account for the increase in tests requests.

Approximately 487,626 specimens submitted for HIV testing to Saskatchewan Disease Control Laboratory since test became available in late 1984. In 2008, 0.37 % of all specimens tested positive for the first time compared to 0.24% in 2006 and 0.28% in 2007 (Fig. 8).



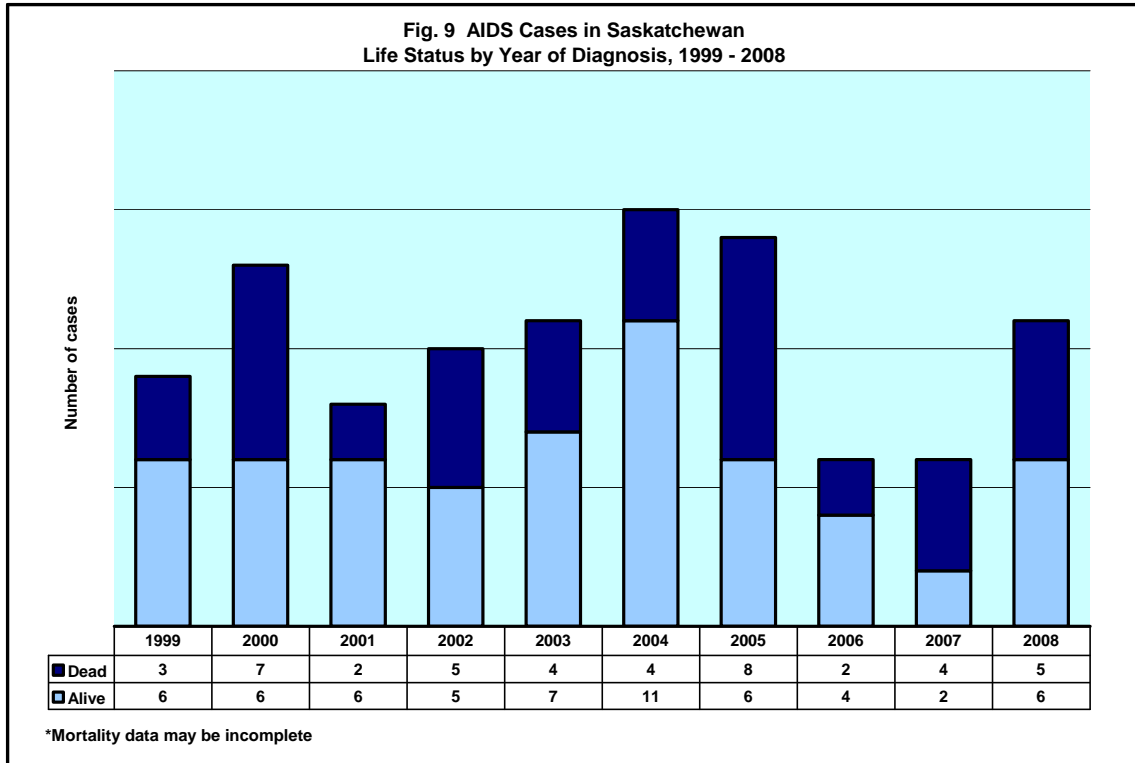
Mortality among HIV cases

Of the 379 IDU cases between the years 2004-2008, 34 deaths have been reported. Not all of these deaths are directly associated with their HIV infection.

AIDS morbidity and mortality

Two hundred fifty four AIDS cases, comprising 207 males and 48 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 occurring figure 9.

Eleven (11) HIV infected individuals, six males and five females were reported as diagnosed with an AIDS defining illness in 2008. Six of the cases were between the ages of 20 and 40years. Five cases died of their illness in 2008 (Fig.9).



Technical notes

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

As 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.

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

This report is based on the number of HIV and AIDS cases diagnosed by laboratory confirmation while resident in the province. Out-of-province residents testing positive for HIV in Saskatchewan are not counted in provincial statistics. 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 and AIDS were 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.

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

Ethnicity is mandatory for reporting and is often self-reported. For purposes of this report, Aboriginal persons comprise Inuit, Métis, and First Nations. The non-Aboriginal classification includes Caucasian, African-Canadian, Latin-American, Asian, South Asian and Arabic ethnicity.

Risk exposure information is self-reported, thus limiting the accuracy and completeness of the data. 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 OCTOBER 2009.

Saskatchewan HIV-AIDS reports are available online: <http://www.health.gov.sk.ca/hiv-aids-reports>