HIV AND AIDS IN SASKATCHEWAN, 2011

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Saskatchewan Ministry of Health
Population Health Branch

Purpose

This annual report examines HIV and AIDS surveillance data reported in Saskatchewan to provide an up-to-date profile of individuals diagnosed with HIV in the province. The report focuses on those cases reported in 2011 within the context of trends and developments in the epidemiology of HIV in Saskatchewan from 2002-2011.

Summary:

This annual report provides an epidemiological review of HIV and AIDS surveillance data in Saskatchewan to the end of December 31st, 2011.

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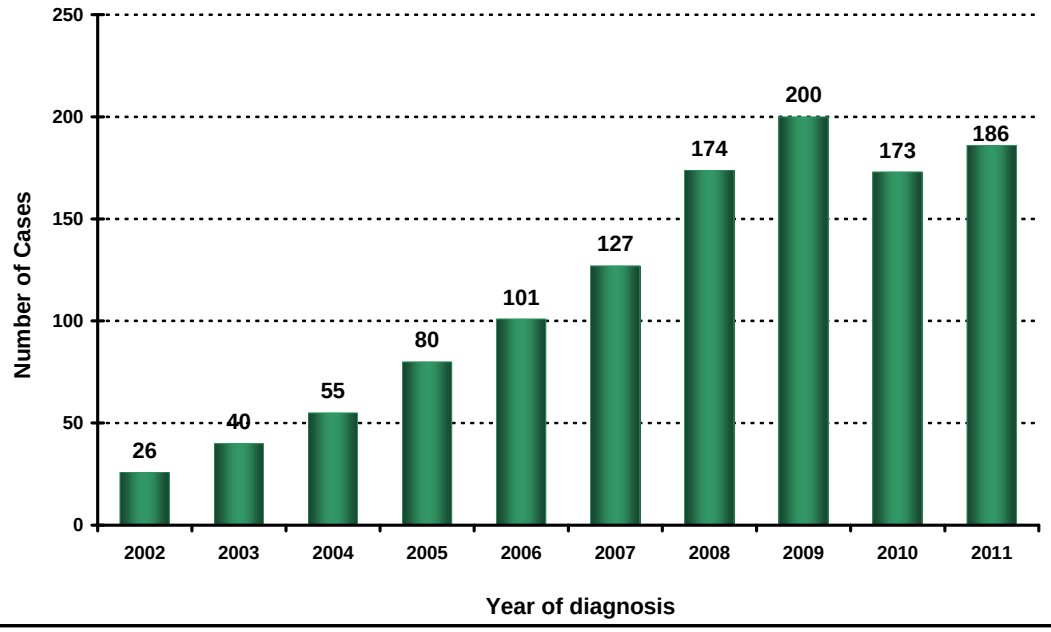
The profile of people living with HIV in Saskatchewan

The number of newly identified HIV cases increased slightly in 2011

In 2011, 186 HIV cases were reported in Saskatchewan, an 8% increase compared to 2010 but 7% below the 200 cases in 2009. A total of 1,558 lab confirmed HIV cases have been reported since HIV monitoring began in 1985. In the last ten years there was a steady increase in the annual number of HIV diagnoses from 26 cases in 2002 to a peak of 200 cases in 2009 (Figure 1). In the following two years, the trend in newly identified cases decreased slightly. The peak in 2009 related, in part, to enhanced efforts to find new HIV cases who may have been infected for a number of years but were not aware of their need for testing.

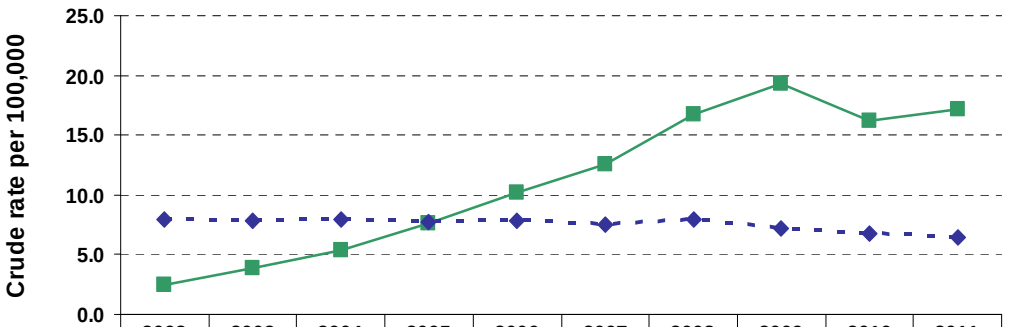
Figure 1 Number of new HIV cases in Saskatchewan, 2002 to 2011



Beginning in 2002 a steady upward trend occurred in the rates of HIV cases reported in the province from 2.5 per 100,000 population to a peak in 2009 of 19.3 newly identified positive people per 100,000 population. The rate decreased to 16.2 cases per 100,000 in 2010 then increased slightly to 17.2 cases per 100,000 population in 2011.

The national HIV rate remained stable between 2002 and 2008 then showed a slight decline in the following three years. By comparison, the Saskatchewan HIV rate surpassed the Canadian rate for positive HIV cases in 2006 and has remained over twice the national rate since 2008 (Figure 2).

Figure 2 **Rate of HIV cases by year Saskatchewan and Canada, 2002-2011**



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
SK	2.5	3.9	5.4	7.6	10.2	12.6	16.7	19.3	16.2	17.2
Canada	7.9	7.8	7.9	7.7	7.8	7.5	7.9	7.2	6.8	6.4

Year of diagnosis

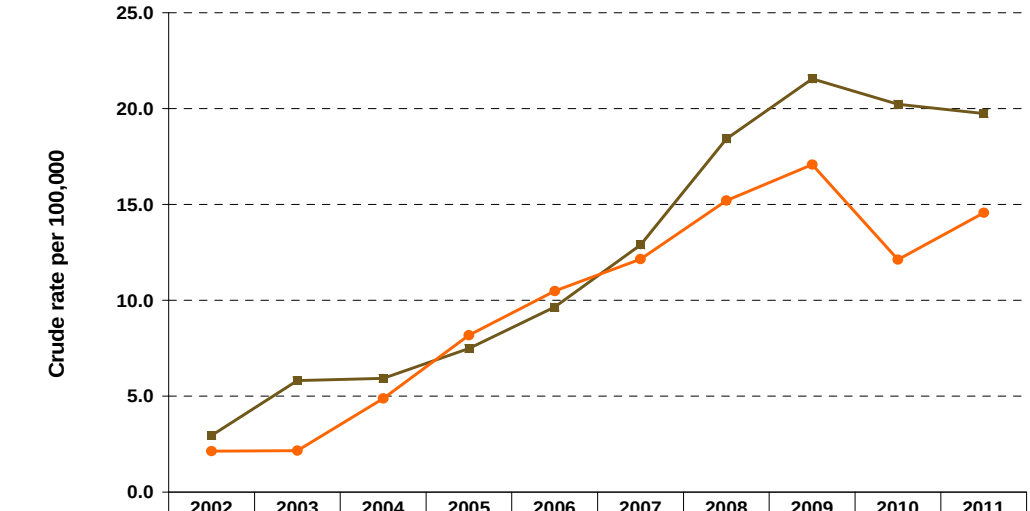
Canadian rates from the Public Health Agency of Canada, 2012

More men than women tested positive for HIV in 2011

Over the past ten years, male cases have accounted for the majority of HIV positive cases in the province compared to females. In 2011, there were 107 male cases (58%) and 79 female cases. This difference is reflected in the gender rates per 100,000 population. (Figure 3).

In 2010 the female rate dropped sharply but rebounded in 2011 (11.9 to 14.6 per 100,000). The drop in female cases in 2010 could be related to a number of reasons including fewer women presenting for testing rather than a true decrease in HIV infection among females.

Figure 3 **HIV case rates in Saskatchewan by gender, 2002 - 2011**



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Male rate	2.9	5.8	5.9	7.5	9.7	12.9	18.4	21.5	20.2	19.7
Female rate	2.1	2.2	4.9	8.2	10.5	12.1	15.2	17.1	12.1	14.6

Year of diagnosis

HIV affected a wide range of ages

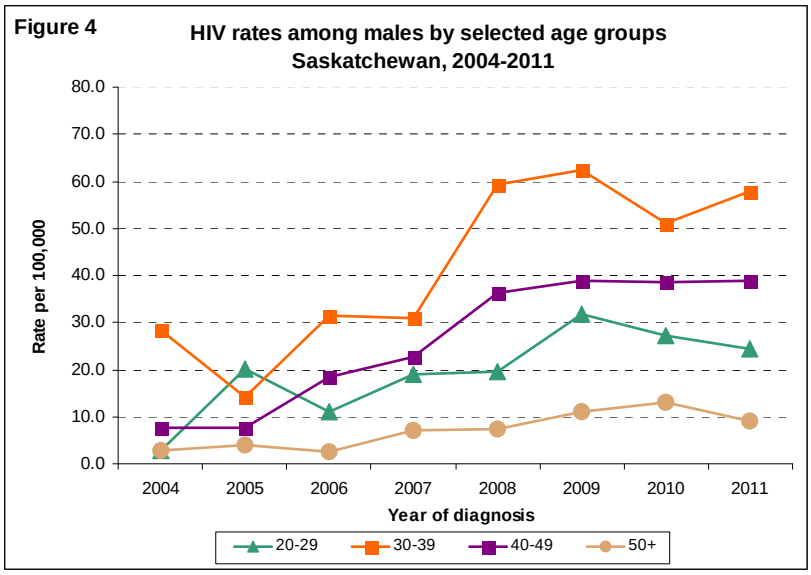
HIV male cases ranged in age from 14 to 68 years in 2011. Female cases ranged in age from 14 to 69 years. Altogether, HIV infected cases aged 20 to 49 years comprised 83% (155 cases) of the 186 cases in 2011, a proportion comparable to 2009 and 2010.

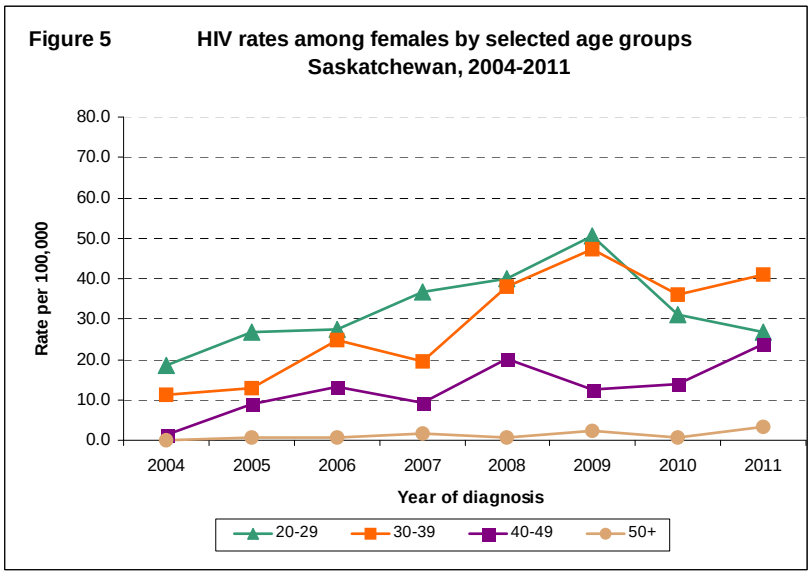
HIV rates declined among young adults in 2011

In 2011, males and females comprised an equal proportion of cases in the 20-29 year age category, comparable to 2010. The disease rate among males in this age group showed a steady increase since 2004 to a peak of 31.8 per 100,000 in 2009 before declining to 24.3 in 2011 (Figure 4). Female rates in this age group also showed a steady increase to a peak of 50.7 per 100,000 females in 2009 and declined to 26.9 in 2011 (Figure 5).

The greatest burden of HIV illness was mainly among those 30 to 39 years of age.

Males aged 30-39 years accounted for 59% of all cases in that age group (41 of 69 cases) and just over one-third (38%) of total male HIV cases in 2011 (41 of 107 cases). Female cases aged 30-39 years also comprised one-third (35%) of total female cases in 2011 (28 of 79 cases). The male and female rate trend in this age group showed a parallel increasing pattern since 2004 which declined after a peak in 2009 with the male rate being an average of 13 points higher throughout that time period.

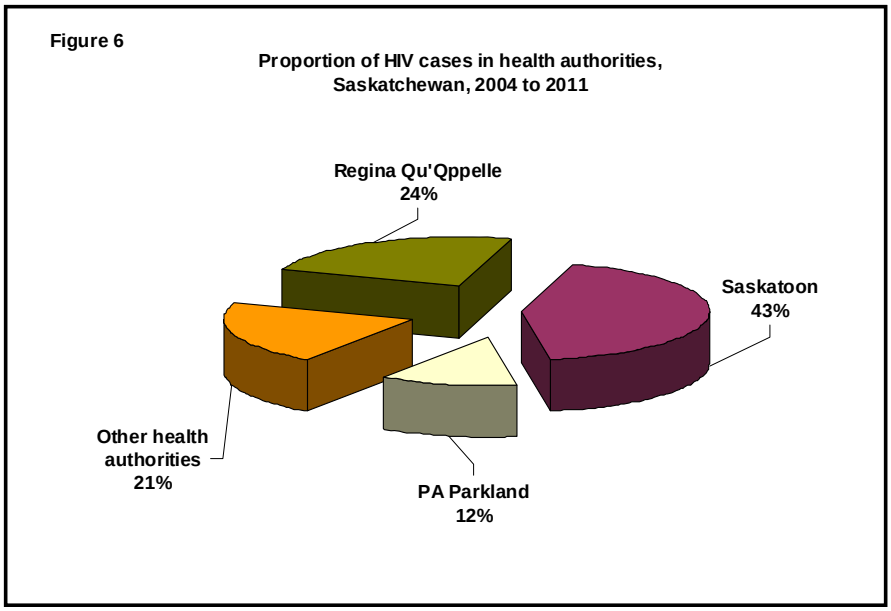




The majority of people living with HIV were from large urban centres

The highest proportion of HIV cases continues to be found in the health regions containing the province's three largest urban centres of Saskatoon, Regina and Prince Albert. This geographic distribution of HIV cases was seen even prior to 2004 when the number of HIV cases began to rise in the province.

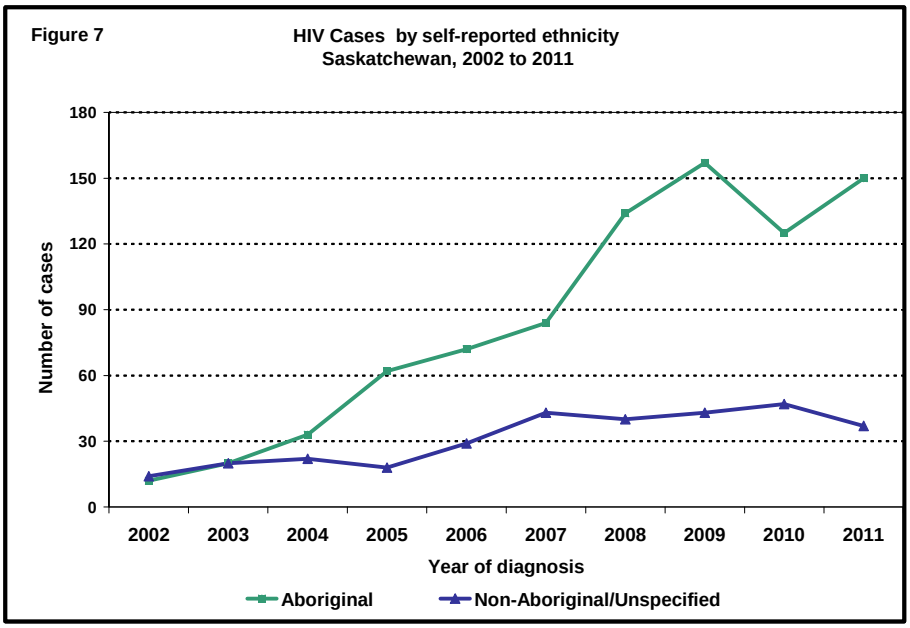
From 2004 to 2011, 43% of the cases within the province have occurred in the Saskatoon Health Region, compared to Regina Qu'Appelle Heath Region (24%) Prince Albert-Parkland Health Region (12%) (Figure 6).



A high percentage of people living with HIV self-report Aboriginal ethnicity

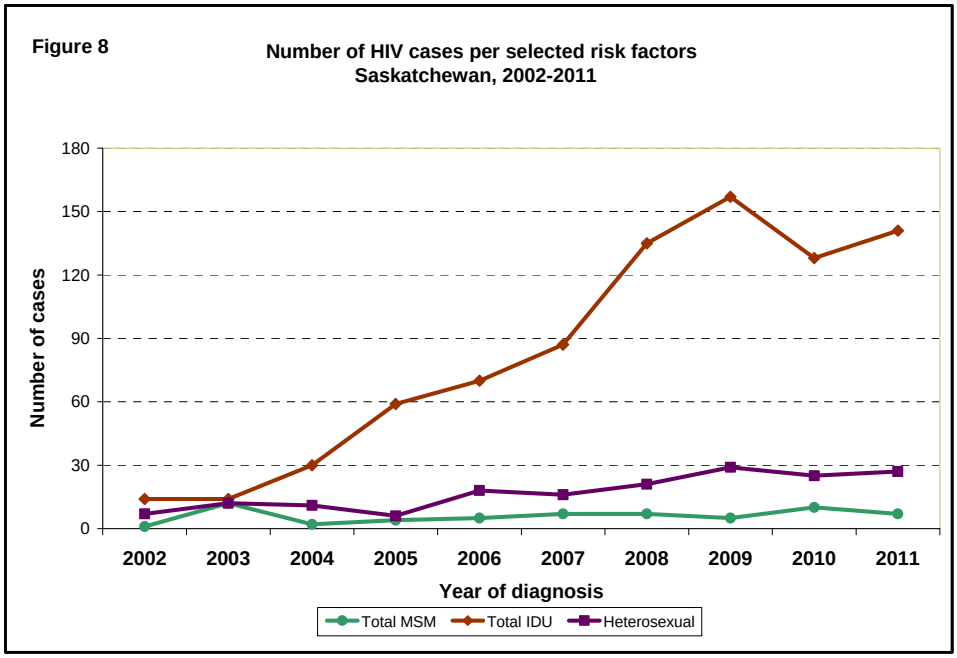
People self-reporting as Aboriginal ethnicity continue to be highly represented among the number of newly diagnosed HIV cases in the province. In 2011, 81% (150 cases) of all newly diagnosed HIV cases self-reported Aboriginal ethnicity (Figure 7). This percentage is the highest in the past ten years but could be related to a larger number of cases self-reporting their ethnicity or to enhanced efforts to offer HIV testing to individuals in First Nations communities.

Female cases reporting Aboriginal ethnicity comprised 87% (69 of 79 cases) of all female cases for 2011, while males self-reporting Aboriginal ethnicity made up 76% (81 of 107 cases) of all male cases this year.



Injecting drugs was the highest risk for acquiring infection as reported by people living with HIV

Information about risk exposures to the HIV virus is self-reported in Saskatchewan. Cases are assigned to an exposure according to a hierarchy of highest risk.



Injection drug use continues to be the most commonly reported risk exposure. The number of people with HIV infection from injection drug use increased to a peak of 157 cases in 2009, largely related to enhanced case finding (Figure 8). In 2011, three-quarters of cases (76%, 141 cases) self-reported injection drug use as their main exposure to the virus. Two-thirds (65%) of these were between 20 and 39 years of age. Men comprised 59% of infected individuals self-reporting this exposure.

Heterosexual activity remains the second most commonly reported exposure risk, albeit five-fold less frequently reported than injection drug use among positive HIV cases, an average proportion of 14% annually. Since 2004, the highest proportion of heterosexually exposed cases has consistently been males 30-39 year age group (35% overall), while female cases reporting this exposure were 20-29 years (30%) and 30-39 years (32%) years.

In Saskatchewan, men engaging in sex with other men (MSM) has never been a major risk reported among HIV positive individuals. In 2011, this risk exposure was reported in 6% (10 cases) of HIV positive individuals. This low percentage has been consistent over the past eight years.

Endemic risk exposure includes people whose origin is in a country where HIV infection is endemic. From 2002-2011, 2% (20 cases) of HIV positive individuals reported this risk exposure. The number of HIV cases from endemic countries has dropped sharply over the past seven years to one to two cases annually.

No babies were born infected with HIV in 2011. Between 2002 and 2010, nine cases of perinatal transmission occurred: 2005 (3 babies), 2007 (4 babies) 2009 (1 baby) and 2010 (1 baby). Infected babies are born mainly to mothers who are unaware of their HIV status at time of delivery.

Risk exposures for HIV infection could not be identified by eight people in 2011 (4%).

The majority of people diagnosed with HIV since 2002 are still alive

Between 2002 and 2011, 1162 people were diagnosed with HIV of whom 995 people, (86%) are still alive. Of the 143 who are known to have passed away, 103 lived with HIV an average of two and a half years after their initial HIV positive test (range 1 to 9 years). Another 39 died in the same year they were diagnosed with HIV. The primary cause of death may not have been directly related to HIV infection.

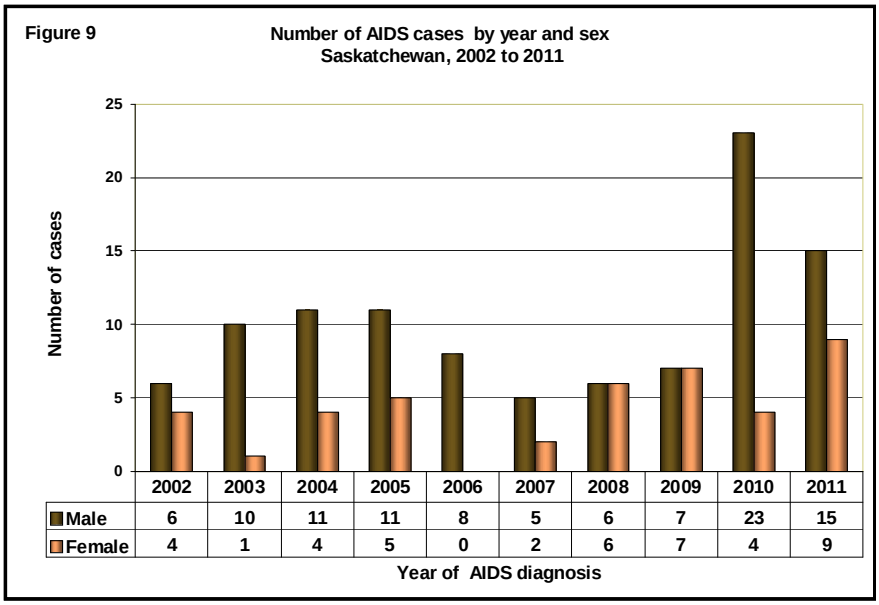
The profile of people living with AIDS in Saskatchewan

The number of females living with AIDS has increased

Over 300 people in Saskatchewan are living or have lived with an AIDS defining illness since 1984 when HIV/AIDS became a provincially notifiable disease. While the 15 men diagnosed with an AIDS disease in 2011 represented a 35% drop from the 23 cases in 2010, the nine female AIDS cases represented a doubling from the four cases the previous year. This also was the highest number of female AIDS cases reported in any one year since 1984 (Figure 9).

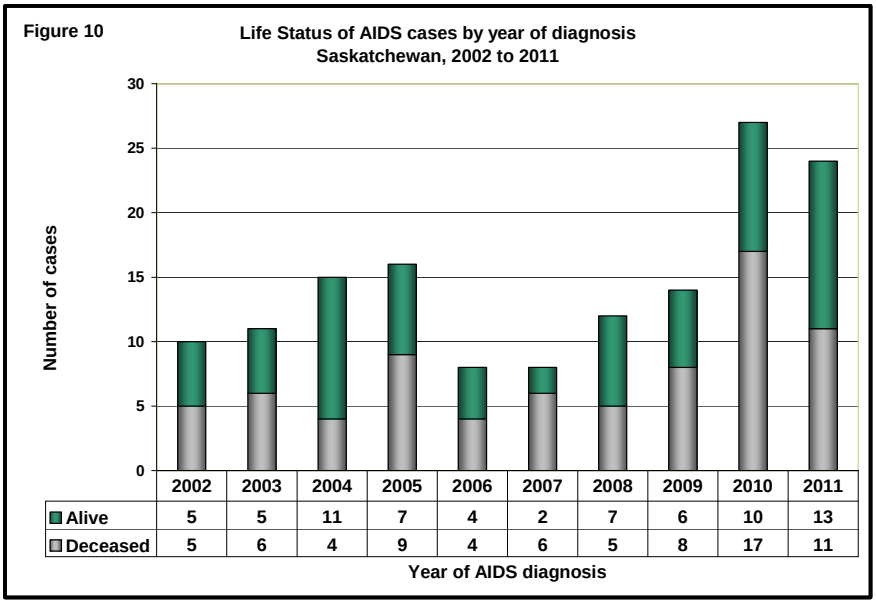
Eight of the 15 male AIDS cases in 2011 were in the 40-49 year age group. All but two of the female cases were between 20 and 39 years of age.

The median length of time between being tested positive for HIV and being diagnosed with AIDS in 2011 was 16 months (range 0 to 14 years). Six of the 24 AIDS cases in 2011 had their initial HIV test at the same time they were diagnosed with an AIDS defining illness.



Just under half of the 24 AIDS cases diagnosed with disease in 2011 have died (11 deaths). (Figure 10)

Three who were first tested for HIV and diagnosed with AIDS in 2011 passed away the same year.



Technical notes and Data Limitations

Notification of HIV and AIDS cases to the local Medical Health Officer and the Saskatchewan Ministry of Health is mandated by the Disease Control Regulations under the Public Health Act, 1994.

Surveillance data is reflective only of the number of cases who are tested and diagnosed with HIV. This data does not reflect those individuals who have not yet been identified. HIV is also reported based on the year of their first positive lab result, and therefore does not necessarily represent the number of new infections that year as individuals could test positive years after acquiring the infection.

This report is based on the number of HIV cases diagnosed by laboratory confirmation while residing in the province of Saskatchewan. Cases that are known to be reported out of Saskatchewan are not counted in this province's statistics.

Only first-time HIV diagnoses are included in this report. All repeat positive and follow-up tests are removed.

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 infant's year of birth.

Individuals tested by Citizenship and Immigration Canada as part of the immigration process are not included in this report.

Health region proportions do not include Aboriginal people identified as living on First Nations reserves located within the boundaries of the regional health authorities. First Nations individuals known to be living on reserve at the time of HIV diagnosis are included in the "other health authorities" category.

Delays occur in the reporting of HIV and AIDS data, specifically for ethnicity and risk exposure categories, as well as for AIDS cases and death information. As updated information becomes available, cases may be reassigned based on this information. As such, numbers may differ at the time of next year's report.

Ethnicity is self-reported. For purposes of this report, Aboriginal persons comprise Inuit, Métis, and First Nations. The non-Aboriginal classification includes Caucasian, Black, Latin-American, Asian, South Asian and other.

Risk exposure information is self-reported, thus limiting the accuracy and completeness of the data. In this report HIV and AIDS cases are assigned to a single exposure category based on a nationally recognized hierarchy of risk. When more than one risk factor is provided, cases are classified as the exposure category that is highest in the hierarchy:

MSM – Men having sex with men

IDU – Injection Drug Use

Het-Exposure – Heterosexual Exposure includes both het-risk and het-NIR (see technical notes for details)

Endemic – Origin from an HIV endemic country

Perinatal – Born to an HIV positive mother

NIR – No identified risk, unknown risk and less likely sources of infection

Heterosexual exposure category in this report includes both those who report heterosexual contact with someone who is either HIV-infected or who is at increased risk for HIV infection. This category also includes those individuals where heterosexual contact is the only exposure activity reported.

Cases stating both MSM and IDU as their risk for acquiring HIV have been counted as an IDU risk exposure.

The annual incidence pattern of AIDS cases does not necessarily reflect the year in which the client was infected, but rather the year in which the individual was diagnosed with an AIDS defining illness.

All Saskatchewan HIV rates cited in this report are reported as crude rates. Rates were calculated by dividing the total number of HIV cases by the Saskatchewan covered population, expressed as the number of cases or events per 100,000 population.