

Saskatchewan Diabetes Profile 2002/2003 to 2006/2007

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Summary:

This profile contains diabetes prevalence and incidence rates for Saskatchewan.

Breakdowns based on sex, age and health authority are included.

In this issue:

Provincial Diabetes Incidence and Prevalence Rates 1-2

Provincial All Cause Mortality Rates With and Without Diabetes 2

Regional Age-Sex Adjusted Diabetes Incidence and Prevalence Rates 3

Technical Notes 4

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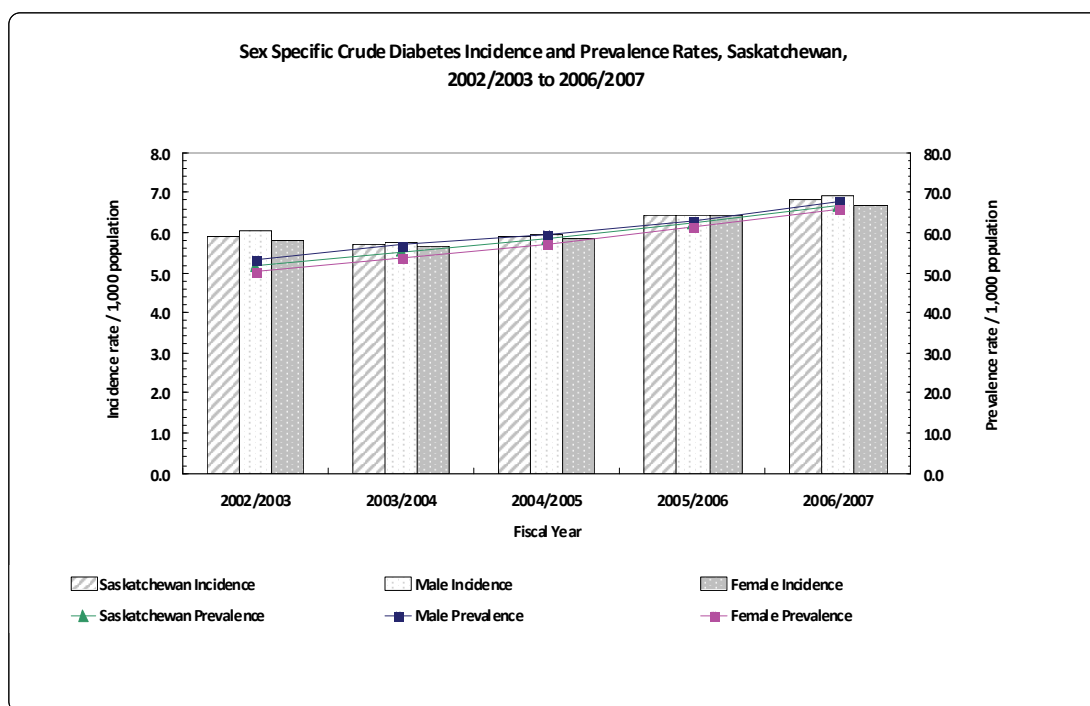
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Purpose

The purpose of this report is to present a synopsis of diabetes distribution patterns in Saskatchewan over the period 2002/2003 to 2006/2007. The report includes sex and age specific provincial diabetes incidence and

prevalence rates, provincial comparison of mortality rates for Saskatchewan residents with and without diabetes and age-sex adjusted incidence and prevalence rates by regional health authority.

Provincial Diabetes Incidence and Prevalence



- Provincial crude diabetes incidence rate increased by 15% between 2002/2003 and 2006/2007 (5.9/1,000 to 6.8/1,000).
- Crude incidence rates increased by about 15% for both males (6 to 6.9/1,000) and females (5.8 to 6.7/1,000) during that time.

- Provincial crude diabetes prevalence rate was almost 15% higher in 2006/2007 than it was in 2002/2003 (51.7 to 66.6/1,000).
- The crude prevalence rate for females was 6.3% lower than that for males in 2002/2003. However, by 2006/2007 the prevalence rate for women was only 2.7% lower than for males.

Provincial Diabetes Incidence and Prevalence Rates

Definitions:

An individual was considered a case if he or she had:

a) one hospital separation with a diagnosis of ICD9 250 or ICD10-CA E10, E11, E12, E13, E14; or

b) two physician visits with a diagnosis of ICD9 250 within a period of 730 days, or

c) received at least one prescription for an antidiabetic agent (insulin or oral hypoglycaemic agent).

Rates for 2005/2006 and 2006/2007 are provisional due to the diabetes definition extending over a two year period.

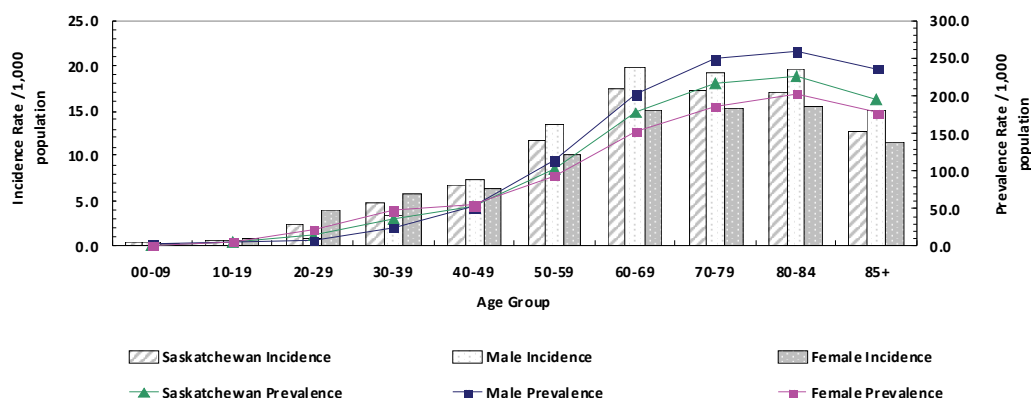
Incidence and prevalence rates may be underestimated for the following reasons:

a) prescription drug information for the registered Indian population was not available (funded federally).

b) individuals with diabetes who did not access the health care system could not be identified.

c) physician services data are incomplete due to inconsistent shadow billing by some non-fee-for-service physicians.

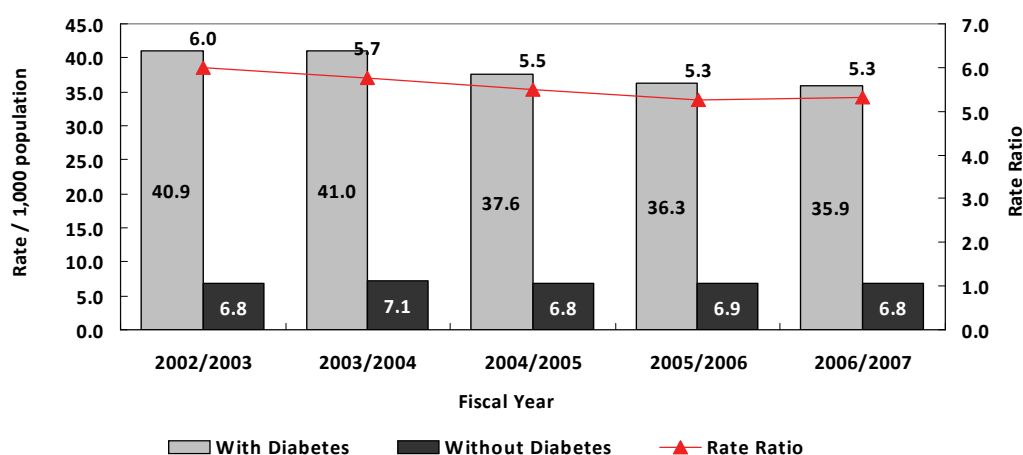
Age-Sex Specific Crude Diabetes Incidence and Prevalence Rates, Saskatchewan, 2006/2007



- Saskatchewan crude age-specific diabetes incidence rates increased until age 70, when rates began to decline. Males and females follow a similar pattern.
- Provincial crude age-specific diabetes prevalence rates reflect patterns similar to incidence rates.
- Diabetes occurs earlier in females than in males. By the time they reach their 50s, the distribution is reversed and the incidence rates for males are higher than for females.
- Provincial crude age-specific prevalence rates were 2.5 times higher for females in their 20s. From age 50 onwards, rates for males are 22% to 34% higher than females.

Provincial All Cause Mortality Rates With and Without Diabetes

Crude All Cause Mortality Rates, Saskatchewan Residents With and Without Diabetes, 2002/2003 to 2006/2007



- The provincial all cause mortality rate for residents with diabetes declined from 40.9 per 1,000 in 2002/2003 to 35.9 per 1,000 in 2006/2007.
- The corresponding rate ratios between all cause mortality for residents with and without diabetes also declined from 6.0 to 5.3 during the same period.

Age-Sex Adjusted Diabetes Incidence and Prevalence by Health Authority

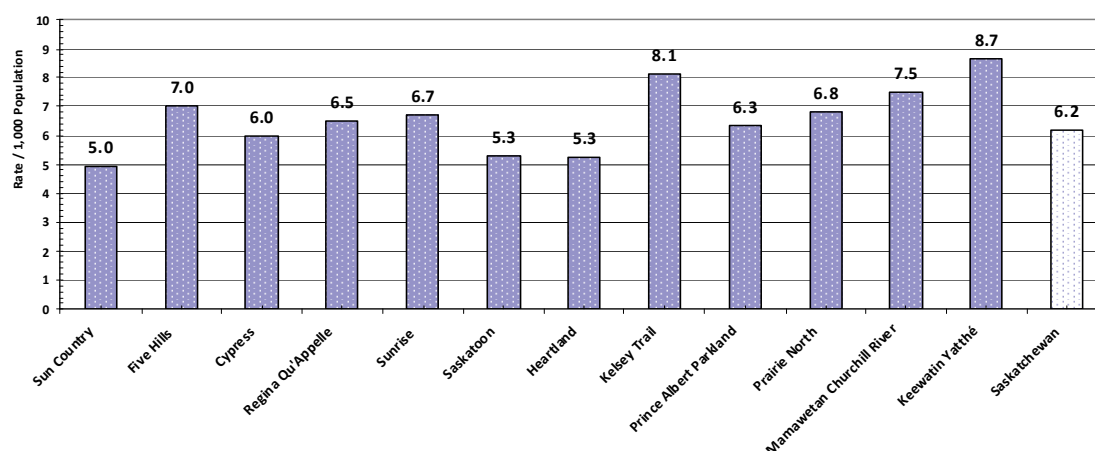
The 1991 Canada Census was used as the standard population for age-sex adjusted rates.

Incidence, prevalence and mortality rates include all Saskatchewan residents with valid health coverage during the fiscal year.

Due to the diabetes definition extending over two years, data for 2006/2007 are provisional.

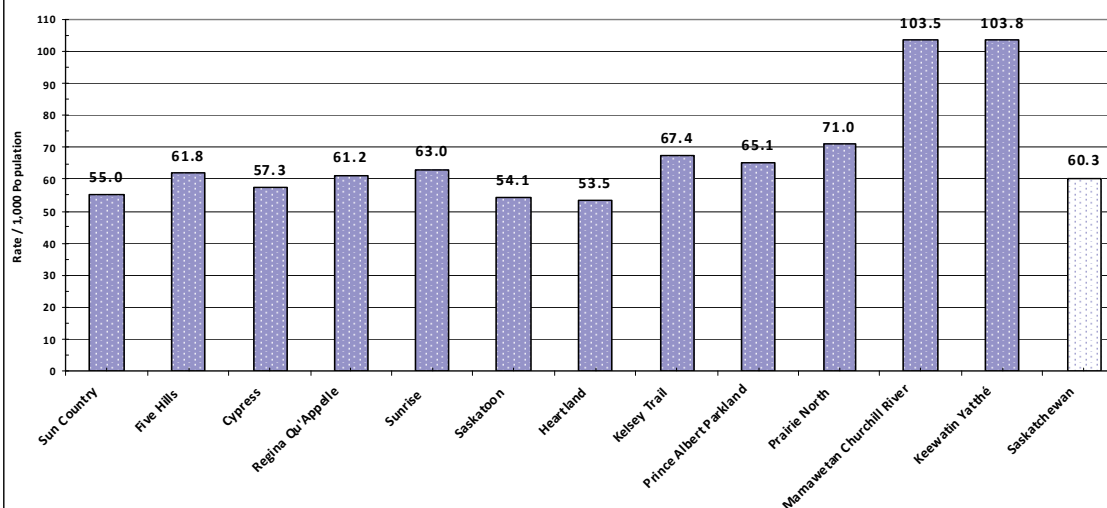
*Incidence and prevalence cases captured in the administrative databases for Athabasca Health Authority are incomplete and are not shown in these charts. However, the Saskatchewan rates include all cases in the province.

Age-Sex Adjusted Diabetes Incidence Rate, by Health Authority of Residence, Saskatchewan, 2006/2007 *



- In 2006/2007, Cypress, Saskatoon, Heartland and Sun Country health authorities had age-sex adjusted diabetes incidence rates below the provincial rate of 6.2 per 1,000.
- Keewatin Yatthe (8.7 per 1,000) and Kelsey Trail (8.1 per 1,000) had the highest age-sex adjusted diabetes incidence rates that year.

Age-Sex Adjusted Diabetes Prevalence Rate, by Health Authority of Residence, Saskatchewan, 2006/2007 *



- Heartland (53.5 per 1,000) and Saskatoon (54.1 per 1,000) had the lowest age-sex adjusted diabetes prevalence rates in 2006/2007.
- Keewatin Yatthe (103.8 per 1,000), Mamawetan Churchill River (103.5 per 1,000), and Prairie North (71.0 per 1,000) had the highest age-sex adjusted diabetes prevalence rates in Saskatchewan in 2006/2007.

Technical Notes

Data source

- A diabetes dataset for Saskatchewan was constructed using the following primary data sources: person registry system (PRS); physician services database; hospital discharge database; and, prescription drug database. These databases were linked through the unique Health Services Number (HSN). The data extraction involved the use of software developed for the Canadian Chronic Disease Surveillance System (CCDSS), formerly the National Diabetes Surveillance System.
- The PRS is a record of all Saskatchewan residents eligible for provincial health coverage. Excluded from eligibility and therefore the population registry, are people whose health care is fully funded federally, including Royal Canadian Mounted Police, Canadian Forces, and inmates of federal penitentiaries. Sex, date of birth, geographic code, start and end dates of health coverage and the HSN were abstracted from the PRS file. The registry file was also the source for denominators for rate calculations.
- The year-end file of hospital discharge data includes information on every in-patient and day surgery hospitalization for a Saskatchewan Health beneficiary.
- Physician services data contain claims for provincially insured services made for payment on a fee-for-service basis. There are also a number of physicians on alternative payment arrangements, e.g., salary, contract. Under these arrangements, physicians may or may not submit shadow claims. Claims received from physicians contain only one diagnostic code, regardless of the number of presenting conditions the client may have.
- Prescription drug data include prescription dispensing records of Saskatchewan Health beneficiaries with the exception of registered Indians, whose prescription drugs are covered federally. Data are captured for all prescription drugs listed in the Saskatchewan Formulary and dispensed to eligible beneficiaries, regardless of the percentage of cost paid by the government.

Limitations

- The information presented in this report originated from Saskatchewan Ministry of Health administrative databases and therefore any changes in programs may have influenced the nature of the data collected.
- Prescription drug data are limited to drugs listed in the Saskatchewan Formulary and to individuals eligible for provincial drug coverage.
- The results of this report may not be comparable to other figures reported by the Saskatchewan Ministry of Health, outside agencies or organizations due to differences in methodologies
- The numbers of incidence and prevalence cases reported from the northern health authorities were underestimated due to physician vacancies and inconsistent shadow billing. Therefore the data presented should be used with caution.

Relevant information links

- Report from the National Diabetes Surveillance System: Diabetes in Canada, 2009
<http://www.phac-aspc.gc.ca/publicat/2009/ndssdic-snsddac-09/pdf/report-2009-eng.pdf>