



Epidemiology

Diabetes is an increasingly important health problem in Manitoba.⁽²⁰⁾ Every year, more than 4,000 Manitobans are diagnosed with diabetes (**Figure 1**). As a result, the number of persons living with diabetes has increased substantially in the past several years.

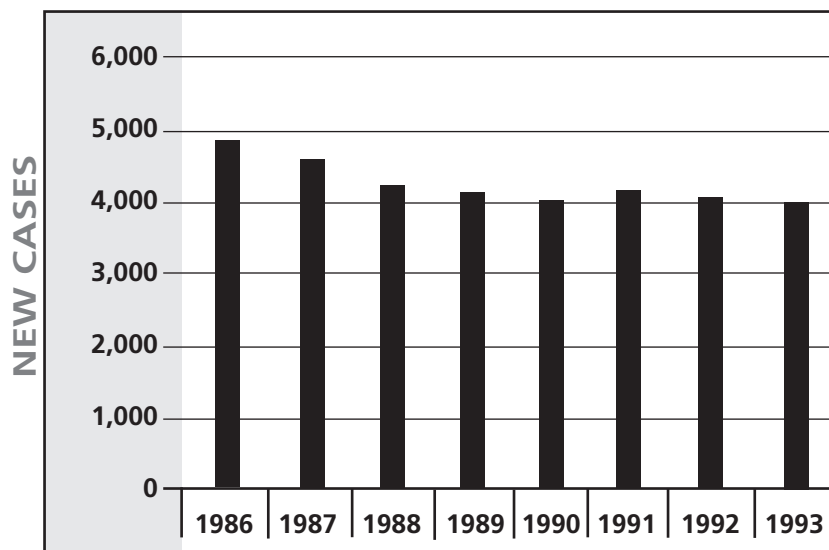


Figure 1. Number of new cases of diabetes among adults (aged 25 and older) in each year, Manitoba 1986-93.

Between 1986 and 1993, the number of adults (age 25 and older) with clinically diagnosed diabetes increased by almost 60% (**Figure 2**). By 1993, there were almost 45,000 Manitoba adults who had been diagnosed with diabetes. It is estimated that there are now over 55,000 adults with clinically diagnosed diabetes in Manitoba.

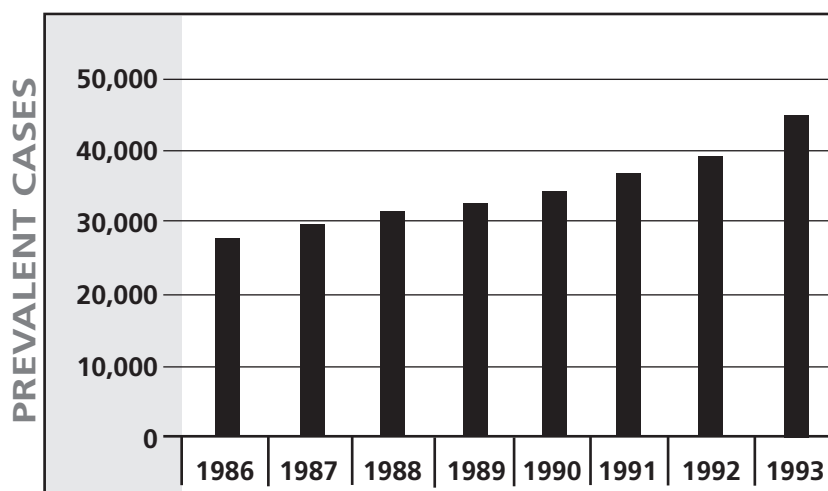
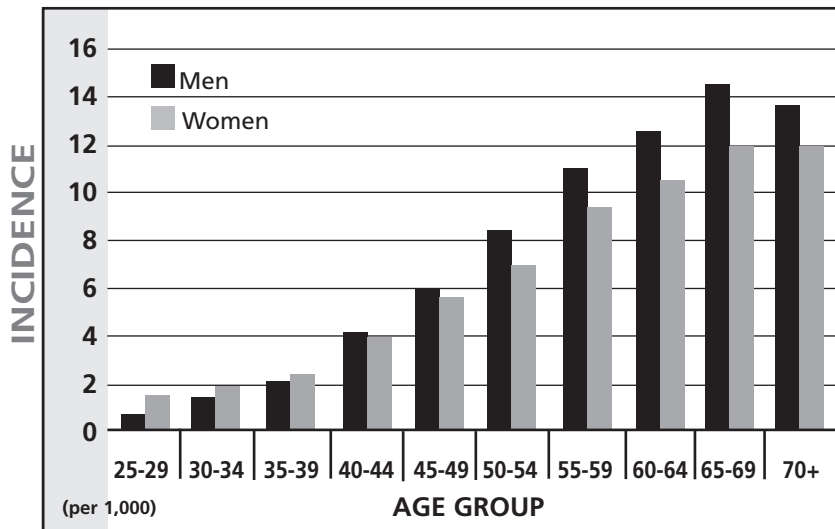
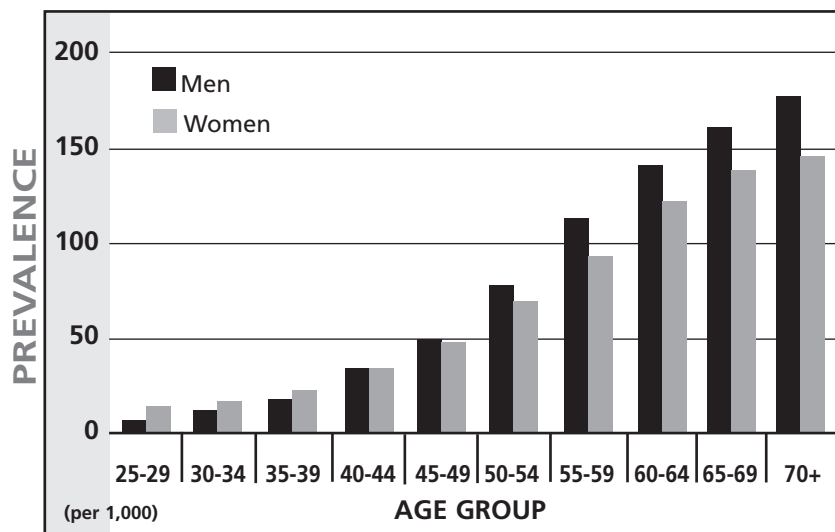


Figure 2. Number of prevalent cases of diabetes among adults (aged 25 and older) in each year, Manitoba 1986-93.



The incidence of new cases of diabetes per year increases with age among both men and women (**Figure 3**). More than 1% of Manitobans age 55 and older develop diabetes each year.

Figure 3. Number of new cases of diabetes (per 1,000 population) in each age group of adult men and women, Manitoba 1989-93.

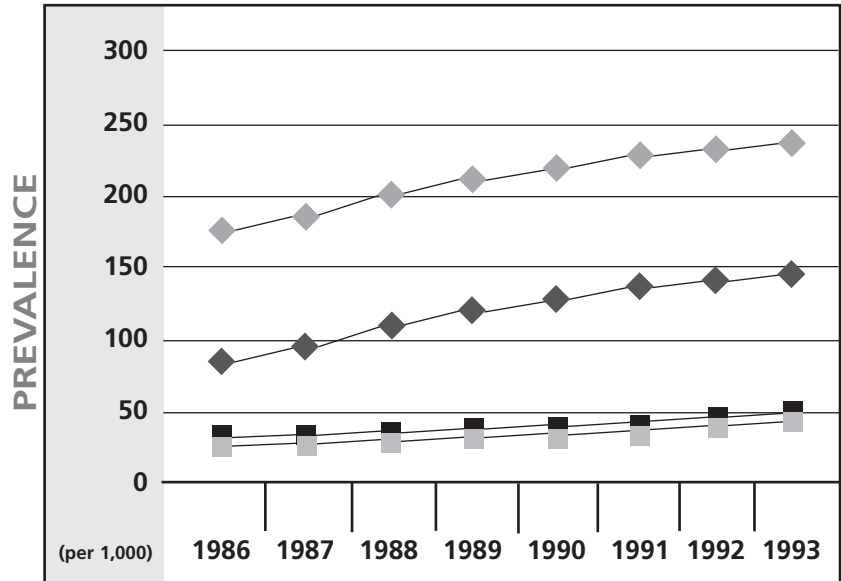


As a result, the prevalence of accumulated cases of diabetes is now very high among Manitoba's growing elderly population (**Figure 4**). More than 13% of Manitobans over the age of 55 and 15% over the age of 65 have been diagnosed with diabetes.

Figure 4. Number of prevalent cases of diabetes (per 1,000 population) in each age group of adult men and women, Manitoba 1994.



Diabetes is much more common among Manitoba's Aboriginal population than it is in the rest of the population. For example, the prevalence of diabetes (after adjusting for differences in population age structures) is almost five-fold higher in Status women than women in the general population (**Figure 5**). Among men, the prevalence is approximately three-fold higher in Status populations than in general populations.



◆ Status Females ◆ Status Males ■ Other Males ■ Other Females

Figure 5. Number of prevalent cases of diabetes (per 1,000 population) adjusted for age, in adult men and women in Status and general populations, Manitoba 1986-93.

Differences in the prevalence of diabetes between Status and general populations are seen in all age groups (**Figure 6**). However, these differences are most pronounced in younger age groups.

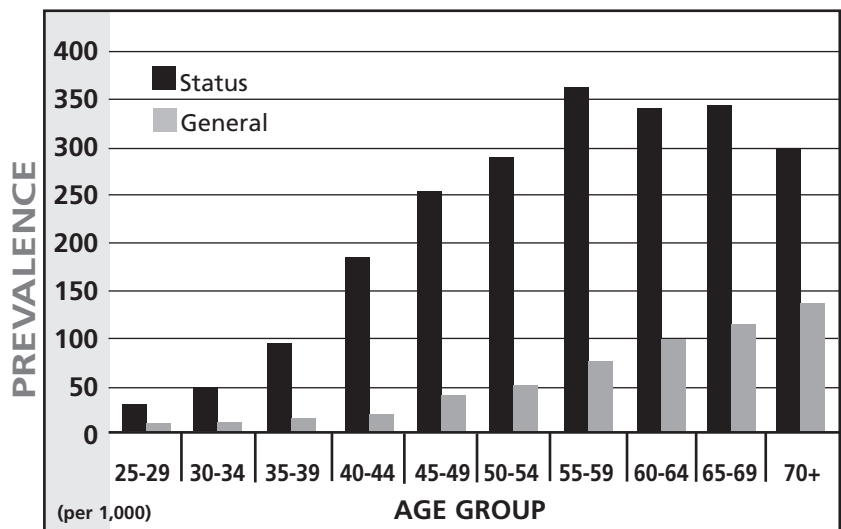


Figure 6. Number of prevalent cases of diabetes (per 1,000 population), in adults in Status and general populations in each age group, Manitoba 1994.

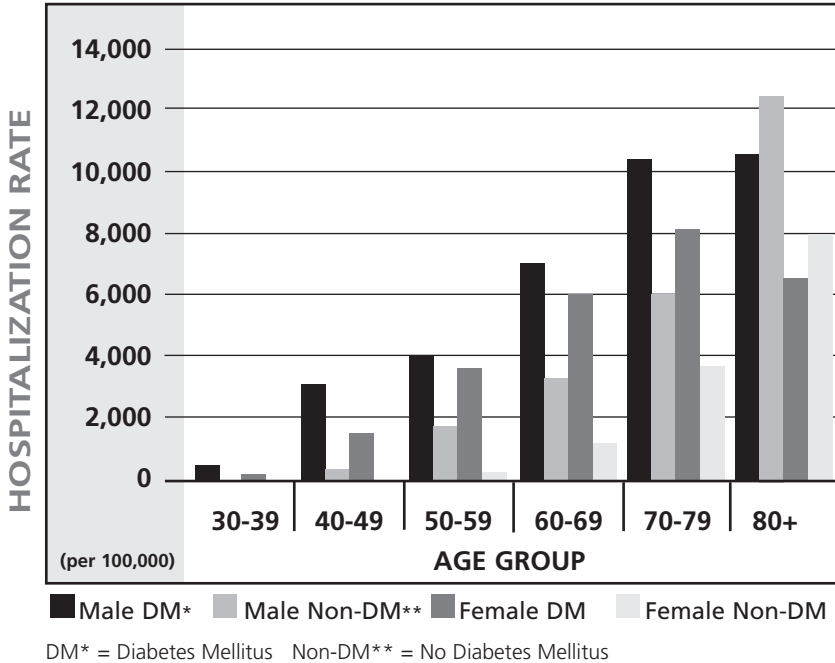


Figure 7. Rate of hospitalization for heart disease (per 100,000 population) in males and females with and without diabetes in each age group, Manitoba 1991.

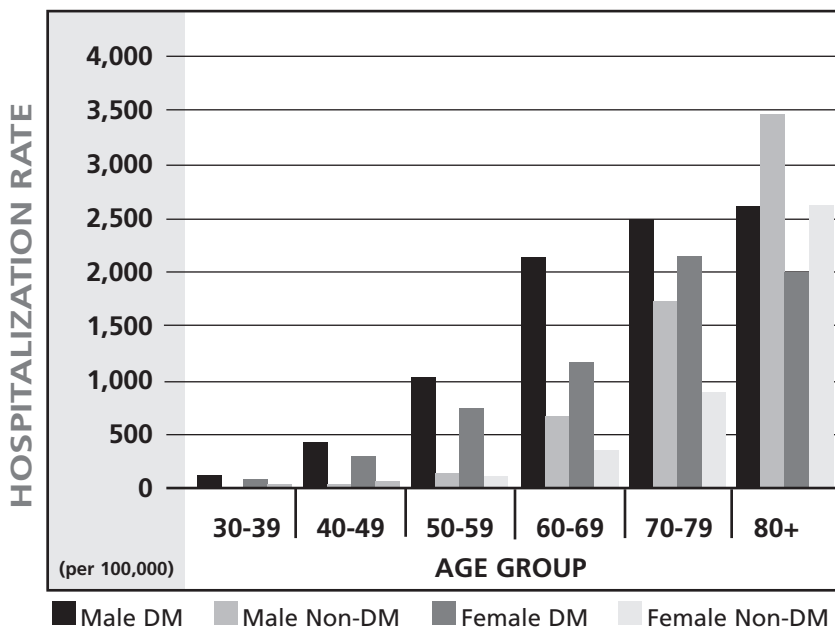


Figure 8. Rate of hospitalization for stroke (per 100,000 population) in males and females with and without diabetes in each age group, Manitoba 1991.

Persons with diabetes are at a much higher risk for many other medical conditions. For example, persons with diabetes are much more likely to develop heart disease and stroke than persons without diabetes (Figures 7 and 8). These differences are most striking among those persons less than 70 years of age.

Approximately 25% of all hospitalizations due to these conditions in Manitoba occur among persons who have diabetes (Figures 9 and 10).

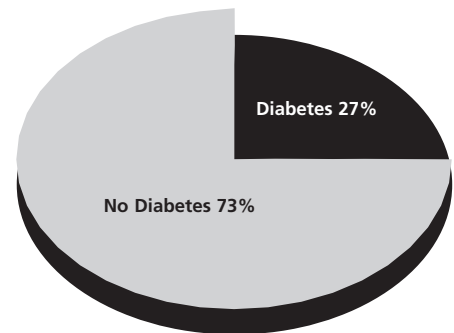


Figure 9. Percentage of people with diabetes among those hospitalized for heart disease, Manitoba 1991.

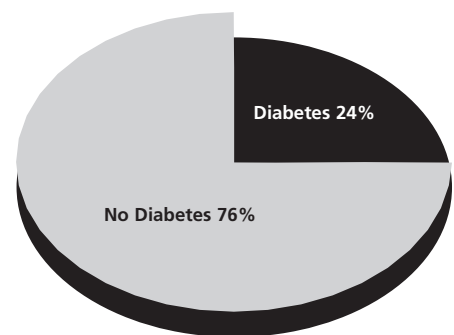


Figure 10. Percentage of people with diabetes among those hospitalized for stroke, Manitoba 1991.



Diabetes can also cause nerve and circulation problems in the extremities, particularly in the legs and feet. Therefore, persons with diabetes are much more likely to develop chronic and severe infections and ulcers in their feet than are persons without diabetes. This is reflected in much higher rates of amputation of the lower limbs among persons with diabetes (**Figure 11**).

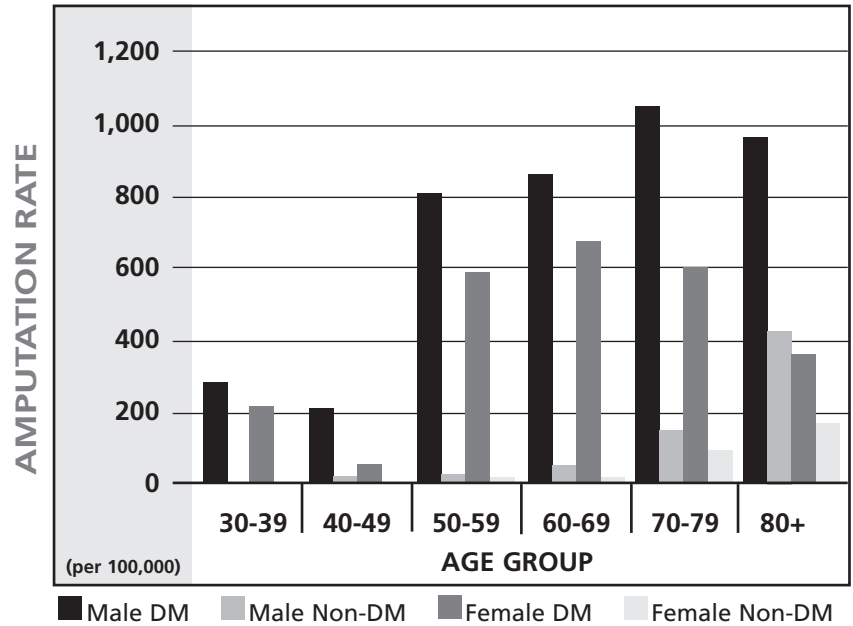


Figure 11. New cases of lower limb amputations (per 100,000 population), in males and females with and without diabetes in each age group, Manitoba 1991.

Persons with diabetes are also at much greater risk for the development of kidney disease. Often, this progresses to the point of requiring kidney dialysis. Persons with diabetes represent an increasing proportion of new persons beginning dialysis in Manitoba (**Figure 12**). By 1993, over 40% of persons who began dialysis had diabetes.

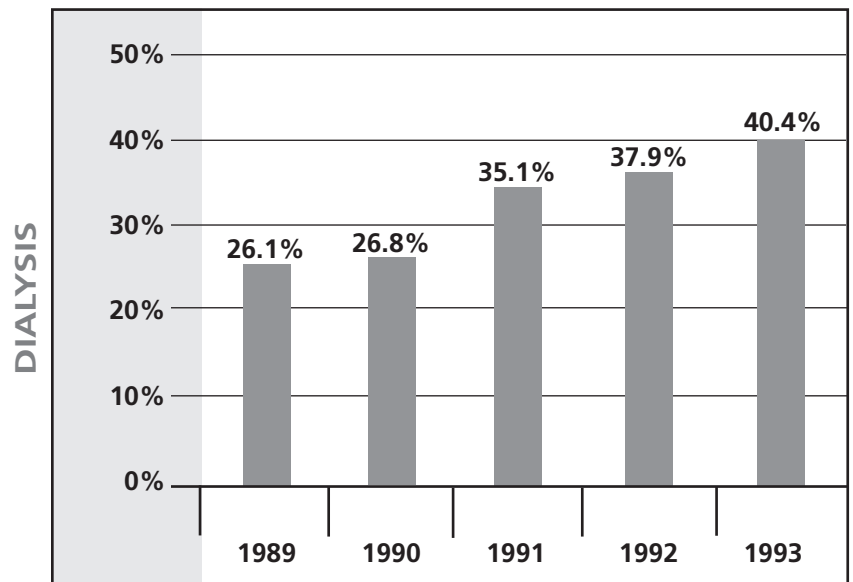


Figure 12. Proportion of persons beginning dialysis who had diabetes, Manitoba 1989-93.

Selected Health Services	Health Care Costs for Adults with Diabetes (cost in millions)	Health Care Costs for Adults without Diabetes (cost in millions)
Hospital Services	\$104	\$403
Personal Care Home Services	\$52	\$243
Professional Services	\$30	\$214
Dialysis	\$7	\$7
Total	\$193	\$867

Table 1. Estimated health care costs for selected health services in adults (15 years and older), with and without diabetes, Manitoba 1995-96.

Selected Health Services	General Population		Status Population	
	No Diabetes	Diabetes	No Diabetes	Diabetes
Hospital Services	\$479	\$1,196	\$893	\$2,362
Personal Care Home Services	\$251	\$340	\$156	\$195
Professional Services	\$271	\$519	\$267	\$606
Dialysis	\$10	\$114	\$43	\$493
Total	\$1,011	\$2,169	\$1,359	\$3,656

Table 2. Per capita expenditures (standardized to the Status population) for selected health services, Manitoba 1995-96.

Economic Costs of Diabetes

Because of the high prevalence of diabetes and its related medical conditions and complications, there are substantial economic costs related to diabetes. In Manitoba, the costs for adults (15 years and older) with diabetes for inpatient hospital services, professional medical services (example, physician fees), dialysis services and personal care home services are estimated to be \$193 million annually (**Table 1**). This represents approximately 18% of health care spending on adults for these services in Manitoba during one year.⁽¹⁰⁾

After standardizing for age, the annual per capita cost for these services is roughly twice as much for adults with diabetes in the general population (\$2,169 per year) (**Table 2**). In Status populations, the per capita cost for these services among adults with diabetes is almost three times as high (\$3,656 per year) as for persons without diabetes (**Table 2**).⁽¹⁰⁾

It should be noted that these costs neither include other directly related health care costs such as drugs, home care, public health services, nor do they include the indirect costs such as disability and lost productivity.⁽¹⁰⁾