

THE COST OF DIABETES IN ONTARIO

The Ontario Diabetes Cost Model¹

In 2009, the Canadian Diabetes Association commissioned a report, "*An Economic Tsunami: the Cost of Diabetes in Canada*," to determine the cost of diabetes in Canada, including the impact of lost productivity on the economy. The report also evaluated the potential benefits of initiatives designed to delay or prevent the onset of type 2 diabetes and reduce the occurrence and severity of complications arising from the disease.

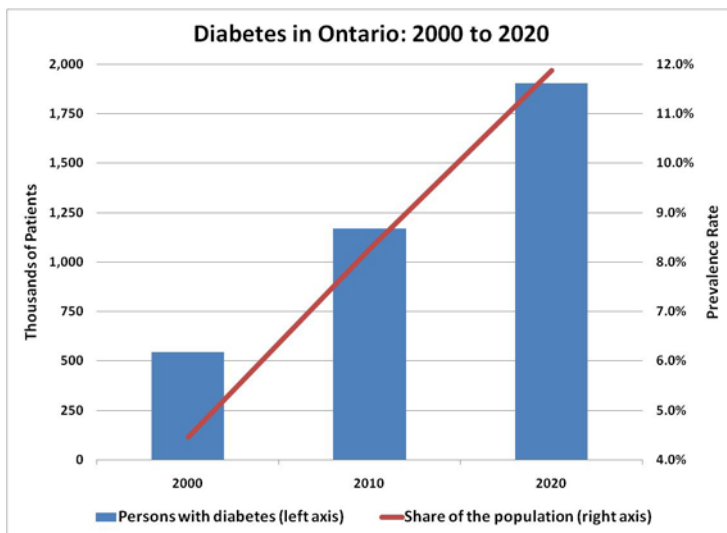
The diabetes cost model used in the 2009 report has since been adapted to provide an analysis of the costs of diabetes at provincial levels. This report summarizes the projected cost of diabetes in Ontario derived through the Ontario Diabetes Cost Model. This is one of a series of reports issued on diabetes at a provincial level. The Association will continue to roll out diabetes cost models across Canada.

¹ The Ontario Diabetes Cost Model was created for the Association by the Centre for Spatial Economics based on the Canadian Diabetes Cost Model developed by Informetrica Limited and made possible by an unrestricted educational grant provided by Novo Nordisk Canada Inc. The two main sources of data used for the estimate and forecasts come from the National Diabetes Surveillance System (NDSS) and Health Canada's study titled the Economic Burden of Illness in Canada (EBIC). The Model aimed to integrate the administrative prevalence and incidence estimates from NDSS with the economic cost estimates from EBIC.

The Model supports analysis of the sensitivity of the prevalence and cost estimates to changes in demographic data, incidence and mortality rates by age and sex, and the average annual number of net general practitioner and specialist visits by people with diabetes. Assumptions made in this model are conservative and may understate the prevalence and cost of diabetes in the future, rather than to overstate it.

The Prevalence of Diabetes in Ontario

The Ontario Diabetes Cost Model estimates² that 1,169,000 people in Ontario have been diagnosed with either type 1 or type 2 diabetes in 2010 – representing approximately 8.3% of the population. This number is expected to increase by 734,000 over the next decade to 1,903,000 or 11.9% of the population.



Source: Ontario Diabetes Cost Model

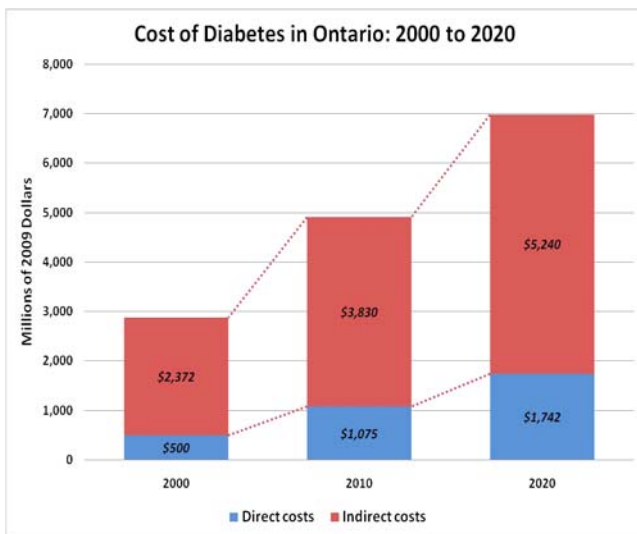
Diabetes in Ontario (Table 1)

	2000	2010	2020
Persons with diabetes (left axis)	546	1169	1903
Share of the population (right axis)	4.5%	8.3%	11.9%

² The estimates provided in this fact sheet include the most current data available from all sources but should be viewed as preliminary and will be subject to revision based on continuing research and more complete data.

The Economic Burden of Diabetes in Ontario

The economic burden of diabetes in Ontario is estimated to be \$4.9 billion in 2010 (measured in 2009 dollars). This cost is expected to increase to 42% in the next decade to over \$6.9 billion by 2020.

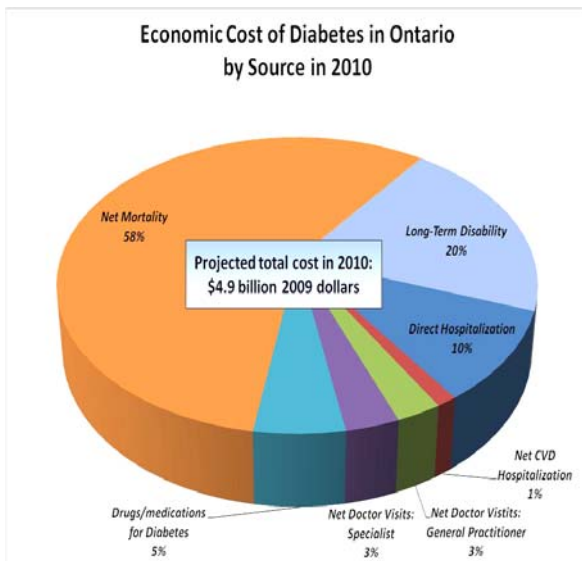


Source: Ontario Diabetes Cost Model

Cost of Diabetes in Ontario in Millions of 2009 Dollars (Table 2)

	2000	2010	2020
Direct costs	500	1075	1742
Indirect costs	2372	3830	5240

The direct costs of diabetes – which accounts for 22% of the total cost of the \$4.9 billion in 2010 – are led by hospitalization costs. Indirect mortality and disability costs account for 78% of the total cost attributed to diabetes by the Diabetes Cost Model.



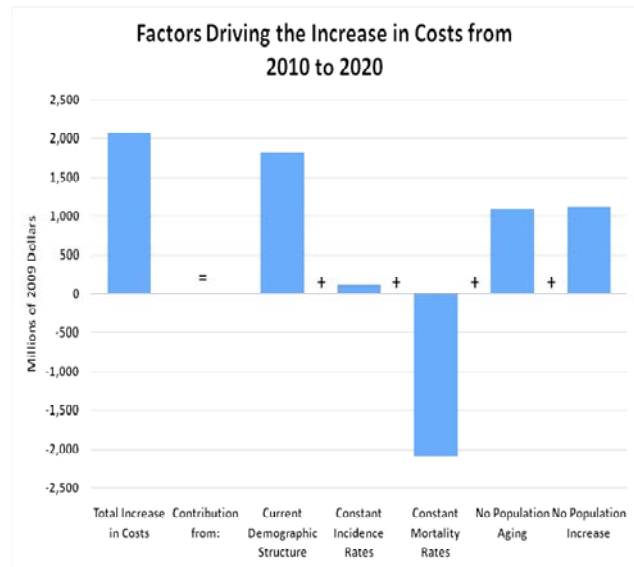
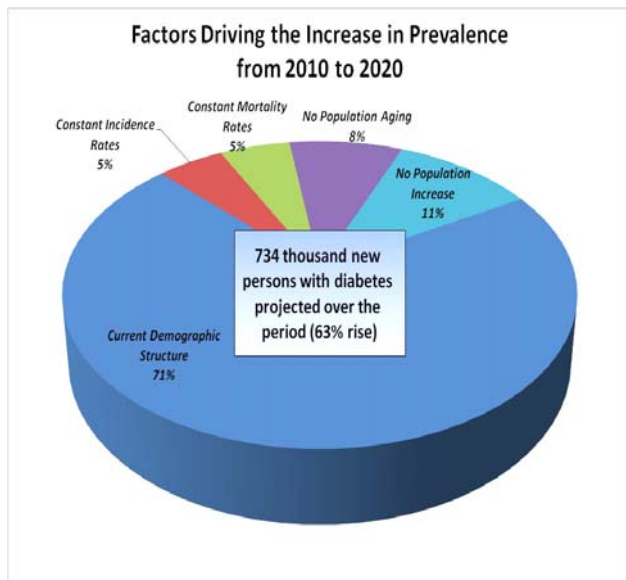
Source: Ontario Diabetes Cost Model

Economic Costs of Diabetes in Ontario in Millions of 2009 Dollars (Table 3)

	2000	2010	2020
Direct Hospitalization	224	483	784
Net CVD Hospitalization	27	58	100
Net Doctor Visits: General Practitioner	59	128	208
Net Doctor Visits: Specialist	71	151	247
Drugs/medications for Diabetes	119	254	403
Net Mortality	1909	2832	3746
Long-Term Disability	463	998	1495
Total	2872	4905	6983

The Factors Driving Diabetes Prevalence and Costs in Ontario

Over the next decade, population growth, an aging population, rising incidence rates and declining mortality rates will be responsible for 11%, 8%, 5% and 5% of the increase in the number of people diagnosed with diabetes in Ontario. Over two thirds of the increase is, however, locked-in – based on the prevalence of diabetes and the province’s current demographic structure – due to the number of net new people diagnosed with diabetes in Ontario each year. These same factors are also responsible for the projected \$2.1 billion increase in costs over the decade. While declining mortality rates for persons with diabetes increases the prevalence of the disease over the period it also decreases the cost of the disease associated with premature mortality.



Source: Ontario Diabetes Cost Model

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