Diabetes in Alberta

Estimated prevalence and cost[1]

Prevalence	2019	2029
Diabetes (type 1and type 2 diagnosed)	353,000 / 8%	521,000 / 10%
Diabetes (type 1)	5-10% of diabetes prevalence	
Diabetes (type 1 + type 2 diagnosed + type 2 undiagnosed) and prediabetes combined	1,136,000 / 24%	1,504,000 / 28%
Increase in diabetes (type 1 and type 2 diagnosed), 2019-2029	48%	
Direct cost to the health-care system	$436 million	$633 million
Out-of-pocket cost per year[2]		
Type 1 diabetes on multiple daily insulin injections	$2,200–$2,400	
Type 1 diabetes on insulin pump therapy	$600–$900	
Type 2 diabetes on oral medication	$500–$2,000	

Impact of diabetes

- Diabetes complications are associated with premature death. Diabetes can reduce lifespan by five to 15 years. It is estimated that at least one in every ten deaths in Canadian adults was attributable to diabetes in 2008–2009.[3]
- People with diabetes are over three times more likely to be hospitalized with cardiovascular disease, 12 times more likely to be hospitalized with end-stage renal disease and almost 20 times more likely to be hospitalized for a non-traumatic lower limb amputation compared to the general population.3
- Diabetes contributes to 30% of strokes, 40% of heart attacks, 50% of kidney failure requiring dialysis, and 70% of non-traumatic lower limb amputations every year[4] and is a leading cause of vision loss.
- The prevalence of clinically relevant depressive symptoms among people with diabetes is about 30%; individuals with depression have an approximately 60% increased risk of developing type 2 diabetes.[5]
- The risk of blindness in people with diabetes is up to 25 times higher than in those without diabetes.[6] Diabetes is the leading cause of acquired blindness in Canadians under the age of 50.[7] Diabetic retinopathy affects 500,000 Canadians.[8]

- Foot ulceration affects an estimated 15%–25% of people with diabetes in their lifetime.[9] One-third of amputations in 2011–2012 were performed on people reporting a diabetic foot wound.[10]
- Some populations are at higher risk of type 2 diabetes, such as those of African, Arab, Asian, Hispanic, Indigenous or South Asian descent, those who are older, have a low income or are living with overweight. Diabetes rates are three to five times higher in First Nations populations than in the general population, a situation compounded by barriers to care for Indigenous peoples.5
- For many Canadians with diabetes, adherence to treatment is affected by cost. The majority of Canadians with diabetes pay more than 3% of their income or over $1,500 per year for prescribed medications, devices and supplies out of their own pocket.[11,12]
- Among Canadians with type 2 diabetes, 33% do not feel comfortable disclosing their disease to others.[12]
- Hypoglycemia (low blood sugar) and hyperglycemia (high blood sugar) may affect mood and behaviour, and can lead to emergency situations, if left untreated.

Policy, programs and services related to diabetes

- In February 2019, the Government of Alberta released *Guidelines for Supporting Students with Type 1 Diabetes.*
- The Government of Alberta discontinued the Alberta Monitoring for Health program on April 1, 2015.
- A publicly funded insulin pump and supplies program was launched in June 2013 by the Government of Alberta for all eligible Albertans with type 1 diabetes, regardless of age.
- Alberta Health-sponsored drug plans (e.g. Blue Cross Coverage for Seniors and Non-Group Coverage) include coverage in June 2012 for the full cost of diabetes supplies (e.g. blood glucose test strips, lancets, syringes, needles, cartridges and urine test strips) to a maximum of $600/year for individuals managing their diabetes with insulin. These drug plans do not cover diabetes supplies for individuals with type 2 diabetes who do not use insulin.
- In June 2012, Alberta Health Services launched the Diabetes, Obesity and Nutrition Strategic Clinical Network (DON SCN), comprised of a diverse community of patients, health-care professionals, associations, government and researchers who are passionate and knowledgeable about these three interrelated health priorities.
- The Alberta Diabetes Strategy (ADS 2003-2013) has expired and some important initiatives introduced within the strategy have been discontinued:
    - The Alberta Diabetes Surveillance System (ADSS) was established to support surveillance and reporting on the incidence, prevalence and mortality of diabetes and its complications and comorbidities. The ADSS ended in March 2012.

    - The Alberta Monitoring for Health (AMFH) program provided low income Albertans living with type 1 or type 2 diabetes without public or private insurance coverage with some funding for diabetes supplies. This program ended in June 2015.
    - The Mobile Diabetes Screening Initiatives (MDSI) provided diabetes screening for some remote communities in Alberta, as well as Indigenous people living off-reserve. The MDSI program ended in 2014.
- Alberta Seniors Benefit, Adult Health Benefit, and Child Health Benefit provide support for diabetes medication, supplies and devices for individuals with type 1 and type 2 diabetes. Individuals who benefitted from the AMFH Program have been transitioned to these programs.

Challenges

Alberta faces unique challenges in preventing type 2 diabetes and meeting the needs of those living with diabetes:

- Alberta had the largest increase in diabetes prevalence during the last 10 years among the provinces and is projected to also experience the largest increase over the next 10 years.
- Alberta is home to 16% of Indigenous, 13% of Southeast Asian, 11% of Latin American, 10% of each South Asian and Chinese, and 8% of Black people in Canada.[13] People of Indigenous descent make up 6% of Alberta's total population.[14]
- Overweight and obesity affect 35% and 31% of adults respectively.[15] About 21% of youth are living with overweight and another 13% are living with obesity.[16] An estimated 19% of the population smokes tobacco, 43% reported being inactive during leisure time and 61% do not eat enough fruit and vegetables daily.[17]
- Albertans with diabetes living in non-metro health zones have lower rates of specialist care visits and higher use of hospital and emergency departments for acute and chronic complications of diabetes.[18]

Diabetes Canada recommendations to the Government of Alberta

1. Enhance access to the supplies and devices people with diabetes need to monitor their blood sugar.
2. Publicly fund devices that help to heal diabetic foot ulcers and decrease the risk of infection and lower-limb amputation.
3. Expand the provincial *Guidelines for Supporting Students with Type 1 Diabetes in School* to include support for daily management tasks and make the guidelines mandatory.
4. Support the Diabetes 360° framework for a nation-wide diabetes strategy.

References

[1] Diabetes statistics in Alberta are estimates generated by the Canadian Diabetes Cost Model, a forecasting model that provides projections on prevalence, incidence and economic burden of diabetes in Canada based on national data from government sources.
[2] Estimated out-of-pocket costs for type 1 and type 2 diabetes were calculated based on composite case studies. As such, the estimates may reflect the out-of-pocket costs for many people with diabetes in Alberta, but not all. The costs are 2015 estimates and may vary depending on income and age. For details on the methodology and estimates, please see the appendix in the Diabetes Canada's *2015 Report on Diabetes: Driving Change,* retrieved from https://www.diabetes.ca/getmedia/5a7070f0-77ad-41ad-9e95-ec1bc56ebf85/2015-report-on-diabetes-driving-change-english.pdf.aspx.
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