



Diabetes Canada

2020 Pre-Budget Consultation Submission

Standing Committee on Finance and Government Services

Government of British Columbia

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Submitted by:

Joan King
Government Relations
Diabetes Canada
Joan.king@diabetes.ca
780-906-6161



Executive Summary

Every three minutes, another British Columbian is diagnosed with diabetes. Approximately 4.4 million people in the province have diabetes or prediabetes, and this number is expected to grow by 35 per cent over the next ten years. Today, the annual cost of the disease to the provincial health-care system is a staggering \$509 million.

Each year, there are thousands of preventable diabetes-related hospitalizations. Diabetes contributes to 30 per cent of strokes, 40 per cent of heart attacks, 50 per cent of kidney failure requiring dialysis, 70 per cent of non-traumatic lower limb amputations and is a leading cause of vision loss. It increases the risk of developing major depressive disorder; in turn, individuals with depression have an approximately 40 to 60 per cent increased risk of developing type 2 diabetes.

To ease the pressure on hospitals, the Government of British Columbia must look to prevention and the improved management of diabetes. To stop the diabetes epidemic, we need urgent action, combined with a comprehensive diabetes strategy with aggressive, measurable goals.

Today, a 20-year-old has a 50 per cent chance of developing diabetes in his or her lifetime. While type 1 diabetes has no known cause and currently cannot be prevented, the World Health Organization estimates that close to 90 per cent of type 2 diabetes cases can be prevented. Type 2 diabetes results from a combination of genetic, environmental and lifestyle factors.

For the 2020 British Columbia Budget, Diabetes Canada urges the Government of British Columbia to:

1. Introduce a Diabetes 360° provincial diabetes strategy. In turn, the comprehensive strategy should include the following:
2. Public coverage of blood glucose monitoring systems for medically eligible British Columbians living with diabetes.
3. Public coverage of specialty (offloading) devices that help heal diabetic foot ulcers and prevent amputations.
4. Enhanced access to diabetes insulin pumps and medications.

1. A comprehensive diabetes strategy for British Columbia

Unnecessary hospitalizations can be eliminated by introducing a comprehensive British Columbia Diabetes Strategy that is complimentary to the [Diabetes 360°](#) strategy framework. The strategy should set aggressive targets to stem the tide of the diabetes epidemic and improve health outcomes for people with diabetes.

The World Health Organization recommends that every country implement a national diabetes strategy, yet despite higher prevalence and per capita costs of diabetes than most of the world's developed nations, Canada has been without one since 2013. We cannot find evidence that a formal provincial diabetes strategy has ever existed in British Columbia.



Canada needs a strategy to coordinate the efforts underway in all provinces and territories to combat this epidemic, one which would bring Canada in line with global best practice, reduce the human burden of this disease significantly in a very short period and achieve savings in health care costs. British Columbia has an opportunity to take the lead by establishing a provincial Diabetes 360° Strategy.

With an aging population and exploding growth rates amongst at-risk populations – from South Asians to Indigenous Canadians – Canada's diabetes burden will continue to rise over the next decade. Both prevalence and direct costs for treating the disease in Canada have been rising at a rate of 4 per cent and 10 per cent respectively per year and show no signs of slowing down. Treating diabetes costs Canada's health care system \$28 billion per year and will approach \$40 billion per year by 2028, unless we act with a sense of urgency.

Diabetes Canada partnered with representatives from more than 100 stakeholder organizations over one year to develop [Diabetes 360°](#) – a measurable, outcome-focused national strategy for the prevention and management of diabetes. It is based on the hugely successful 90-90-90 model implemented globally to combat HIV/AIDS and is the product of collaboration among 129 stakeholders including representation from nine provincial governments.

If implemented, the strategy could achieve **\$9 billion in health care cost savings** across Canada from diabetes prevention alone over seven years.

The Diabetes 360° framework includes specific evidence-based recommendations in the areas of prevention, screening, treatment and patient outcomes for diabetes, and is set up to deliver results in just seven years by focusing on the following key targets:

- 90 per cent of Canadians live in an environment that preserves wellness and prevents the development of diabetes
- 90 per cent of Canadians are aware of their diabetes status
- 90 per cent of Canadians living with diabetes are engaged in appropriate interventions to prevent diabetes and its complications
- 90 per cent of Canadians engaged in interventions are achieving improved health outcomes

These targets are based on extensive consultation and rigorous analysis of research, and the actions required for their achievement are detailed in Diabetes Canada's [Diabetes 360°](#) report.

Diabetes Canada has submitted its recommendations for a nationwide diabetes strategy to the Government of Canada and requests the establishment of a seven-year national partnership with the federal government's strategic investment of \$150 million over the seven years. The partnership would collaborate with provinces and territories, civil society and private sector to prioritize and implement programs to achieve the Diabetes 360° targets and then sunset – a realistic and evidence-based approach that can work for Canada and for British Columbia.

Recommendation: Diabetes Canada urges the Government of British Columbia to develop a comprehensive provincial diabetes strategy that is complimentary to Diabetes 360°. The strategy should set aggressive targets to stem the tide of the diabetes epidemic and improve health outcomes for British Columbians at risk of or living with diabetes.



Furthermore, Diabetes Canada recommends a comprehensive British Columbia Diabetes Strategy include the following:

2. Glucose monitoring systems for British Columbians with diabetes

For some people with diabetes, devices such as a continuous glucose monitor (CGM) or a Flash glucose monitor (FGM) can help them stay within their target blood sugar range when compared to capillary blood glucose monitoring (i.e. a blood glucose reading collected from a drop of blood placed on a test strip). Staying within the target blood sugar range is important to prevent or postpone long-term complications, including heart attack, stroke, kidney failure, blindness and amputation. It can also prevent severe hypoglycemia (low blood sugar) which can be life-threatening.

A **continuous glucose monitor** is a wearable device that tracks blood glucose every few minutes throughout the day and night. The readings are then relayed in real time to a device, which can be read by the patient, caregiver or health-care provider, even remotely. This information gives people living with diabetes a more complete picture of their blood sugar control, which can lead to better short and long-term treatment decisions. It can help them identify when their blood sugar is trending down, which allows for appropriate and timely treatment to avoid hypoglycemia. It can also provide early indication of hyperglycemia (high blood sugar) over the course of the day so that timely adjustments to medications, activity and food intake can be made to help achieve blood sugar targets. Alarms on the device can also help users to take action early to prevent life-threatening emergencies, especially if the users are hypoglycemic unaware (i.e. they do not show or are unable to recognize the typical symptoms of low blood sugar).

A CGM includes a small disposable sensor that is worn under the skin (often on the stomach or arm), an attached transmitter and, usually, a separate receiving device, such as an insulin pump or smart phone.

Flash glucose monitoring also measures glucose concentration, but it differs from CGM technology in several ways. FGM is factory calibrated and does not require the user to calibrate it with a manual blood glucose test. Blood glucose levels are not continually displayed on a monitoring device but instead are displayed when the sensor is 'flashed' with a reader device on demand.

The flash reader also displays a plot profile of the last eight hours, derived from interpolating glucose concentrations recorded every 15 minutes. Therefore, when the person with diabetes performs three or more sensor scans per day at up to eight-hour intervals, the flash system records 24-hour glucose profiles. The sensor can be worn continuously for up to 14 days. The device does not provide low or high glucose alarms.

Diabetes Canada's *2018 Clinical Practice Guidelines* notes that blood glucose monitoring aids people with assessing the effectiveness of their glucose-lowering interventions, while also helping to prevent and detect hypoglycemia (low blood sugar). Timing and frequency of blood glucose monitoring depends on diabetes type, treatment type, the need for information about blood glucose levels, and the individual's ability to modify healthy behaviours or self-adjust antihyperglycemic medications (such as insulin).



While awaiting recommendations from British Columbia's health technology assessment review, Diabetes Canada refers to Health Quality Ontario recommendations for public funding for both types of devices for people with diabetes who meet specific criteria:

- [Continuous glucose monitoring](#): Patients with type 1 diabetes who are willing to use CGM for the vast majority of the time and who meet one or more of the following criteria:
 - Severe hypoglycemia without an obvious precipitant, despite optimized use of insulin therapy and conventional blood glucose monitoring, and/or
 - Inability to recognize, or communicate about, symptoms of hypoglycemia.
- [Flash glucose monitoring](#): Health Quality Ontario's draft report, released January 2019, recommends publicly funding FGM systems for:
 - People with type 1 diabetes who experience recurrent hypoglycemia despite frequent self-monitoring of blood glucose and efforts to optimize insulin management, and
 - People with type 2 diabetes requiring intensive insulin therapy (multiple daily injections or use of insulin pump) who experience recurrent hypoglycemia despite frequent self-monitoring for blood glucose and efforts to optimize insulin management.

Recommendation: The Government of British Columbia publicly fund blood glucose monitoring devices to assist medically eligible British Columbians to self-manage their diabetes and prevent or postpone the serious complications of the disease.

3. Amputation prevention for British Columbians with a diabetic foot ulcer

In British Columbia there is **one amputation every 15 hours as a result of a diabetic foot ulcer**. Diabetic foot ulcers that result in amputations cost the British Columbia health-care system up to \$120 million annually in direct costs, including physician visits, hospital stays, long-term care and homecare.

Diabetic foot ulcers are serious wounds that are common, debilitating and one of the most feared complications of diabetes (blindness being the second). They are also the leading cause of all non-traumatic amputations below the knee in Canada. Each year nearly 590 British Columbians have a lower-limb amputation. Up to 85 per cent of these amputations may be prevented if foot ulcers are treated properly.

Devices that lower the pressure on the foot (offloading devices) are needed to prevent and treat diabetic foot problems. Currently, a patient without private insurance in British Columbia would be required to incur the cost of an offloading device which all too often competes with priorities, like rent, food and child expenses. When a diabetic foot ulcer heals properly, a person spends approximately five days in the hospital, ER and clinics. With a lower limb amputation, a person spends approximately 86 days in the hospital, ER and clinics, dramatically increasing the burden on British Columbians with diabetes and the health-care system.



Demonstrated in Diabetes Canada's report, [The Economic Impact of Offloading Devices for the Prevention of Amputations in British Columbia](#), public funding of offloading devices, averaging \$1,425 per person plus the cost of the orthotist visits, would cost a total of \$6.2-10.3 million a year. At the same time, other associated direct health-care costs would decrease by \$25-29 million a year resulting in a net savings for the government of between \$14-23 million a year, beginning the first year of implementation.

Recommendation: The Government of British Columbia fund off-loading devices and the cost of orthotist visits for people with a diabetic foot ulcer to help reduce the tremendous personal and economic costs of amputations in the province.

4. Equitable access to insulin pumps and diabetes medications

Insulin pumps:

Diabetes is a complex and heterogenous disease. Diabetes Canada feels strongly that a diabetes management plan should always be individualized and include options for care. Patient choice is the cornerstone of person-centred care and policy. Given this, we believe that a 'one size fits all' or tiered approach with respect to the funding of insulin pumps does not provide for patients (and their prescribers) to access the device that maybe best suited to their individual self-management needs.

The provision of the tier one insulin pump at no cost to eligible British Columbians with diabetes regardless of age is a welcome relief to the financial burden of managing diabetes *if* that device is best suited to the individual needs of a patient. If it is not compatible or preferred, an individual through his or her provider must receive special approval to access the tier two pump that is subject to costs according to the rules of Fair PharmaCare. This results in inequitable access to insulin pumps in British and surely compromises optimal diabetes care for many British Columbians. People with diabetes need timely and affordable access to the therapy that best meets their individual needs.

Diabetes medications:

British Columbians with diabetes require timely access to medications with evidence-based criteria that are in-line with Diabetes Canada's Clinical Practice Guidelines. In May, British Columbians living with type 2 diabetes and health-care providers welcomed British Columbia's listing of one medication from the SGLT2 inhibitor class to its public formulary.

Empagliflozin has been proven to help reduce blood glucose and significantly decrease the risk of major cardiovascular events in people with type 2 diabetes and clinical cardiovascular disease. Unfortunately, the criteria for access are not consistent with evidence-based national recommendations for empagliflozin from the Canadian Agency for Drugs and Technologies in Health or Diabetes Canada's [Clinical Practice Guidelines](#), and are more restrictive than in many of the other provinces that reimburse the drug. As a result, some British Columbians do not have timely access to a medication that could be life-saving.

Recommendation: The Government of British Columbia close the gaps to access diabetes medications, devices and supplies needed to manage the disease so that the devastating and costly complications can be avoided.