



Submitted to:

The Honourable Scott Fielding, Minister of Finance

Government of Manitoba

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We Can't Wait Another 100 Years to End Diabetes

This year marks the 100th anniversary since the revolutionary Canadian discovery of insulin, but it is not a cure. Diabetes continues to take the lives of Canadians and the prevalence rates are alarming with one in three Canadians living with or at risk of diabetes and our youth aged 20 years old have a 50 per cent chance of being diagnosed with type 2 diabetes in their lifetime. The COVID-19 pandemic is hindering care, heightening consequences, and putting people with diabetes at a three times higher risk of dying from COVID-19. With a sense of urgency and the understanding that despite the help of insulin, diabetes is successful at taking over the country, As Canada's largest charitable organization dedicated to supporting people living with all forms of diabetes, which was started by Charles Best in 1940, Diabetes Canada is looking to mobilize other healthcare, research and community partners, industry, government, and all Canadians to finally end diabetes.

Diabetes Facts:

- Close to 11.5 million Canadians (**403,000 Manitobans**) are living with diabetes or prediabetes
- Diabetes is the leading cause of vision loss and blindness in those 20-65 years of age.
- Diabetes contributes to 30% of strokes, 40% of heart attacks, 50% of kidney failure requiring dialysis.
- Diabetes is the cause of 70 per cent of all non-traumatic limb amputations.
- Having diabetes can shorten one's lifespan by five to 15 years.
- Diabetes is successful at taking money out of Canadians' pockets, costing \$30 billion dollars annually to treat (**\$147 million in Manitoba**).
- The ongoing pandemic has added to the anxieties around diabetes, with one-third of Canadians saying they are now more concerned about diabetes than they were before.
- Adults living with diabetes who contract COVID-19 are at greater risk of developing serious symptoms and complications, like pneumonia, and they are almost three times more likely to die in hospital.

About Diabetes

Type 1 diabetes is an auto-immune condition that causes the body's own immune system to attack and kill the insulin producing cells in the pancreas. Type 1 diabetes cannot be prevented and is often diagnosed in childhood, but adults can also be diagnosed. Individuals with type 1 diabetes produce very little or no insulin, causing too much sugar to accumulate in the blood.

Elevated blood sugar can over time result in serious complications, including heart attack, stroke, kidney failure, blindness and amputation. Individuals with type 1 diabetes require insulin to live and administer it several times a day by needle or insulin pump. They also need to

monitor glucose levels regularly in order to make necessary adjustments to insulin, activity and food. It is imperative that individuals with diabetes try to keep blood sugar as close to target range as possible to reduce the risk of complications. Five to ten per cent of people with diabetes have type 1 diabetes.

About 90 per cent of people with diabetes have type 2 diabetes. Although individuals who develop type 2 diabetes are also genetically susceptible to this condition, it is largely the result of poor nutrition and lack of physical activity driven by environmental and socio-economic factors. Type 2 diabetes occurs when blood sugar increases because the body does not make enough insulin or cannot properly use the insulin that is produced.

A third type of diabetes, gestational diabetes, is a temporary condition that occurs during pregnancy, but does increase risk of developing type 2 diabetes for both mother and child.

Prediabetes refers to blood glucose levels that are higher than normal, but not sufficiently high to constitute a diagnosis of type 2 diabetes. If left untreated, more than half of people with prediabetes will go on to develop type 2 diabetes within eight to 10 years.

About Diabetes Canada

Diabetes Canada is a registered charitable organization that leads the fight against diabetes by helping those affected to live healthy lives and preventing the onset and consequences of diabetes while we work to find a cure.

Making diabetes a priority in Manitoba's Health System Transformation

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

- There are 223,310 Indigenous Peoples in Manitoba who face significantly higher rates of diabetes (up to 80 per cent and in some subgroups within this population, it is even higher) and adverse health consequences than the overall population.ⁱ
- 47 per cent of adults and 46 percent of youth are physically inactive. Overweight and obesity affect about 36 per cent and 31 per cent of adults in Manitoba respectively.ⁱⁱ

And rates are expected to continue to rise over the next decade. Once thought to be a disease of older individuals, type 2 diabetes is now being diagnosed in young Manitobans, impacting people in the prime of life. Manitobans now 20 years old face a 50 per cent chance of

ⁱ Aboriginal Peoples Highlight Tables, 2016 Census [Internet]. Statistics Canada; 2017 Oct [cited 2019 Dec 17]. Available from: <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/hltfst/abo-aut/Table.cfm?Lang=Eng&S=99&O=A&RPP=25>

ⁱⁱ Health characteristics, annual estimates [Internet]. Statistics Canada; 2019 Dec [cited 2019 Dec 17]p. Ottawa. Available from <https://doi.org/10.25318/1310009601-eng>

developing the disease in their lifetime. The estimated prevalence and cost of diabetes in Manitoba 2021 and 2031 are as follows:

Estimated prevalence Manitoba	2021	2031
Diabetes (type 1 and type 2 diagnosed)	146,000 / 10%	194,000 / 12%
Diabetes (type 1)	5-10% of diabetes prevalence	
Diabetes (type 1 + type 2 diagnosed + type 2 undiagnosed) and prediabetes combined	403,000 / 28%	488,000 / 31%
Increase in diabetes (type 1 and type 2 diagnosed), 2020-2030	33%	
Direct cost to the health care system	\$147 million	\$194 million

The estimated direct cost of diabetes and its complications to Manitoba's health-care system will grow to reach **\$194 million by 2031**. Treating the complications of the disease, including heart attacks, strokes, blindness, kidney failure and amputation account for 80 per cent of this cost. Regrettably, the current system is more focused on the treatment of poorly managed diabetes and its related conditions than on the prevention and better management of diabetes that would result in less cost to personal health and to the health system. It is critical that Manitoba make diabetes a priority in its health transformation journey so the goals of improving the quality, accessibility and efficiency of health-care services province-wide can be achieved.

Diabetes Canada's Recommendations

As Manitoba Health makes transformative changes to achieve a health-system that delivers improved outcomes and services for all Manitobans, Diabetes Canada submits the following three recommendations for shaping the 2021 provincial budget:

1. Diabetes Canada recommends the government of Manitoba support with ample resources the provincial diabetes *prevention* strategy and further commit to developing a provincial diabetes *management* strategy based on the Diabetes 360° strategy framework with key targets, actions, measures and outcomes

We acknowledge Manitoba's commitment to creating a **diabetes *prevention* strategy** that is based on the Diabetes 360° framework and we anticipate its launch in 2021. For Manitoba to fully benefit from the Diabetes 360° framework and reduce the personal and economic burden of diabetes and its complications, Manitoba requires a **diabetes *management* strategy** also based on the Diabetes 360° framework to address screening for diabetes, diabetes management and improved health outcomes.

[Diabetes 360°](#) is a measurable, outcome-focused strategy framework 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.

The Diabetes 360° framework includes specific evidence-based recommendations in the areas of prevention, screening, treatment and patient outcomes for diabetes by focusing on the following key targets:

- 90% of Canadians live in an environment that preserves wellness and prevents the development of diabetes
- 90% of Canadians are aware of their diabetes status
- 90% of Canadians living with diabetes are engaged in appropriate interventions to prevent diabetes and its complications
- 90% 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 our [Diabetes 360°](#) report.

Bold action is needed to bring about necessary change in Manitoba that will help stem the tide of diabetes. While adopting a prevention strategy is a great first step, adopting the full Diabetes 360° strategy can transform Manitoba's health-care system and achieve measurable health improvements for Manitobans living with the condition.

2. Diabetes Canada recommends the government of Manitoba publicly fund advanced glucose monitoring devices for Manitobans living with diabetes who would benefit, specifically:

- **Continuous glucose monitoring (CGM) devices for people with type 1 diabetes where there are demonstrated improved health outcomes, irrespective of age.**
- **Flash glucose monitoring devices for people with insulin-treated diabetes (type 1 and type 2) aged 18 years and older, where there are demonstrated improved health outcomes.**

Blood glucose monitoring gives people living with diabetes a more complete picture of their blood glucose (sugar) control, which can lead to better short- and long-term treatment decisions and health outcomes. Until recently, the standard way to monitor the concentration of glucose in the blood has been to obtain a drop of blood from a finger prick and get a blood glucose reading using a blood glucose meter. This is called self-monitoring of blood glucose (SMBG). SMBG has several drawbacks, including the pain of pricking one's fingers often several times a day and less thorough information about glucose concentration trends.

For some people with diabetes, advanced glucose monitoring devices such as a *continuous glucose monitor* or a *flash glucose monitor* can help them stay within their target glucose range when compared to SMBG. Staying within the target glucose range is important to reduce the

risk of diabetes-related 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 (CGM)** is a wearable device that can be offered to people with type 1 diabetes to track glucose concentration every few minutes throughout the day and night to improve glucose control and reduce hypoglycemia (low blood sugar). The readings are relayed in real time to a compatible device (e.g. smart phone) which can be read by the patient, caregiver or health-care provider, even remotely. This information can help people identify when their blood sugar is trending down, which allows for appropriate and timely treatment to avoid severe hypoglycemia. It can also provide early indication of hyperglycemia (elevated glucose) over the course of the day so that timely adjustments to medications, activity and food intake can be made to help achieve glucose 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 are unable to recognize the typical symptoms of low blood sugar) or experience low blood sugar at night that puts them at risk of not waking up.

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.

A **Flash glucose monitor** is also a device that measures, displays and continuously stores glucose readings that are recorded automatically. It can be used by adults (age 18 years and older) with both type 1 and type 2 diabetes using insulin. A Flash device uses an externally worn sensor with a small filament inserted under the skin of a person's upper arm. When the sensor is scanned with a separate touchscreen reader device, it transmits the real-time glucose reading and information on the most recent eight-hour trend to the reader. If the person with diabetes performs at least three sensor scans per day at approximately eight-hour intervals, a Flash glucose monitor can record 24-hour glucose profiles.

While advanced glucose monitoring devices are included in many private and group health insurance plans, public coverage is scarce across Canada. Manitobans without private or group health insurance plans must pay out-of-pocket for these glucose monitoring devices which have an annual cost of \$3,000 - \$5,000 for CGM and \$2,500 for flash glucose monitoring. For many people, the cost is prohibitive. Restricted access means a lost opportunity for people with diabetes to enhance their health outcomes, diabetes-specific quality of life and disease management satisfaction.

3. Diabetes Canada recommends the government of Manitoba eliminate the age discrimination in the provincial insulin pump program

Type 1 diabetes is a chronic disease affecting the lives and livelihoods of 7,000 – 14,000 Manitobans. It places an enormous burden on individuals as well as their families, the health system and society as a whole. There is no cure for type 1 diabetes; survival in this population hinges on intensive intervention, education and support, coupled with a strict regimen of insulin and lifestyle management.

Insulin pumps represent an alternative to multiple daily injections. The clinical effectiveness of insulin pumps is well documented. Diabetes Canada’s Clinical Practice Guidelinesⁱⁱⁱ state:

- insulin pump therapy is a safe and effective method of intensive insulin therapy for people with type 1 diabetes, and has shown improvements in glucose control over NPH-based regimens and over long-acting analogue regimens
- insulin pump therapy may provide some advantages over other methods of intensive therapy, particularly in individuals with higher baseline A1C
- insulin pump therapy results in fewer episode of severe hypoglycemia compared to multiple daily injections

In addition to these outcomes, insulin pump therapy can offer people with diabetes greater independence, flexibility and a sense of normalcy as they work to be active and productive citizens. These are very important considerations and should be weighed appropriately in a patient-centred healthcare system.

Diabetes Canada strongly believes that people with diabetes require choice in treating their condition and that it is discriminatory to refuse eligibility for an insulin pump based on age. Diabetes does not go away and an insulin pump can be a critical tool for some Manitobans 18 years and older living with type 1 diabetes.

Currently, many Manitobans with diabetes pay out-of-pocket more than 3% of their income or over \$1,500 per year for prescribed medications, devices and supplies:

Out-of-pocket cost per year Manitoba 2021	
Type 1 diabetes on multiple daily insulin injections	\$800–\$3,100
Type 1 diabetes on insulin pump therapy	\$2,200–\$6,200
Type 2 diabetes on oral medication	\$1,900

Out-of-pocket costs that exceed 3% or \$1,500 of a person’s annual income are defined as catastrophic drug costs by the Kirby and Romanow Commissions on healthcare. 25 per cent of

ⁱⁱⁱ Diabetes Canada’s Clinical Practice Guidelines Expert Committee. (2018). Diabetes Canada 2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada. *Can J Diabetes*, 42 (1), S1-S325.

Canadians with diabetes report that these costs affect their adherence to their prescribed treatment regimens, which risks their short and long-term health.

Regrettably, some Manitobans whose prescriber has recommended an insulin pump as a preferred treatment option must either go without the benefit of a pump or incur a financial burden. Experience in other jurisdictions indicates that 30 per cent of adults with type 1 diabetes often choose an insulin pump over multiple daily injections.

British Columbia, Alberta, Ontario do not impose an age restriction on their insulin pump programs. Manitoba should also provide insulin pump therapy as a choice to adults living with type 1 diabetes so eligible individuals can benefit from.

Conclusion

Diabetes Canada would be pleased to work with the government of Manitoba to implement the recommendations contained in this submission as an important component of the provincial health system transformation process. Manitobans living with diabetes or at risk of diabetes need appropriate support to achieve their full health potential while reducing their risk of costly complications. With concerted efforts and strong leadership from the government, in close collaboration with key stakeholders in the diabetes community, we can bend the impact curve of diabetes and significantly transform provincial health for the benefit of all Manitobans.

Kindly contact me for more information or with any questions on the issues contained in this submission: Joan.king@diabetes.ca or call 780 906-6161.