

**Diabetes in Prince Edward
Island**

2022 Background

Summary: This backgrounder provides key statistics about diabetes in Prince Edward Island, the impact of diabetes on the population of Prince Edward Island, and Diabetes Canada's recommendations to the Government of Prince Edward Island to address diabetes prevention and management.

Publication Date: February 2022

Report Length: 5 Pages

Cite As: Diabetes in Prince Edward Island: Backgrounder. Ottawa: Diabetes Canada; 2022.

About Diabetes Canada: Diabetes Canada is a national health charity representing more than 11.7 million Canadians living with diabetes or prediabetes. Diabetes Canada leads the fight against diabetes by helping those affected by diabetes live healthy lives, preventing the onset and consequences of diabetes, and discovering a cure. It has a heritage of excellence and leadership, and its co-founder, Dr. Charles Best, along with Dr. Frederick Banting, is credited with the co-discovery of insulin. Diabetes Canada is supported in its efforts by a community-based network of volunteers, employees, health care professionals, researchers, and partners. By providing education and services, advocating on behalf of people living with diabetes, supporting research, and translating research into practical applications, Diabetes Canada is delivering on its mission. Diabetes Canada will continue to change the world for those affected by diabetes through healthier communities, exceptional care, and high-impact research.

For more information, please visit: www.diabetes.ca

Contact: advocacy@diabetes.ca with inquiries about this Diabetes Canada report.

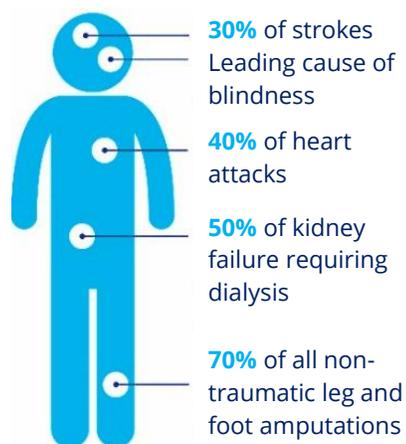
Estimated Prevalence and Cost of Diabetes

Prevalence (1)	2022	2032
Diabetes (type 1 + type 2 diagnosed + type 2 undiagnosed)	25,000 / 15%	31,000 / 18%
Diabetes (type 1 and type 2 diagnosed)	17,000 / 11%	22,000 / 13%
Diabetes (type 1)	5-10% of diabetes prevalence	
Diabetes (type 1 + type 2 diagnosed + type 2 undiagnosed) and prediabetes combined	50,000 / 31%	58,000 / 34%
Increase in diabetes (type 1 and type 2 diagnosed), 2022-2032	24%	
Direct cost to the health care system	\$19 Million	\$23 Million
Out-of-pocket cost per year (2)		
Type 1 diabetes on multiple daily insulin injections	\$1,500	
Type 1 diabetes on insulin pump therapy	\$1,900-\$5,200	
Type 2 diabetes on oral medication	\$1,700	

Impact of Diabetes

- Among Prince Edward Islanders (1):
 - **31%** live with diabetes or prediabetes, and
 - **11%** live with diagnosed diabetes, a figure that climbs to 15% when cases of undiagnosed type 2 diabetes are included.
- Diabetes complications are associated with premature death (3). Diabetes can reduce lifespan by **five to 15 years** (3). It is estimated that the all-cause mortality rate among Canadians living with diabetes is **twice** as high as the all-cause mortality rate for those without diabetes (4).
- 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 (5):



- The prevalence of clinically relevant depressive symptoms among people living with diabetes is approximately **30%** (6). Individuals with depression have a **40% - 60%** increased risk of developing type 2 diabetes (6).
- Diabetic retinopathy is the leading cause of vision loss in people of working age (7). Vision loss is associated with increased

falls, hip fractures, and a 4-fold increase in mortality (7). The prevalence of diabetic retinopathy is approximately **25.1%** in Canada (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).
- The risk factors for type 1 diabetes are not well understood, but interaction between genetic and environmental factors are likely involved (11). Type 2 diabetes is caused by a combination of individual, social, environmental, and genetic factors (11).
 - Certain people are at higher risk of developing type 2 diabetes, such as those of African, Arab, Asian, Hispanic, Indigenous, or South Asian descent, those who are older, have a lower level of income or education, are physically inactive, or are living with overweight or obesity (11).
 - The prevalence of diabetes among adults in the lowest income groups is **3.7 times** that of adults in the highest income group (12).
 - Adults who have not completed high school have a diabetes prevalence **10.2 times** that of adults with a university education (12).
- 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-pocket (2,13).
- Among Canadians with type 2 diabetes, **33%** do not feel comfortable disclosing their disease to others (2).
- Hypoglycemia (low blood sugar) and hyperglycemia (high blood sugar) may

affect mood and behaviour and can lead to emergency situations if left untreated (11).

Policy, Programs, and Services Related to Diabetes

- In Budget 2021, the government announced \$1 million in diabetes supports.
- Effective January 2021, the insulin pump program was expanded to include Islanders up to 25 years, and monthly coverage of blood glucose test strips was increased from 100 to 120 strips monthly for individuals with diabetes using insulin.
- In November 2020, the government announced the renewal of its provincial diabetes strategy (2020-2024) that is aligned with the Diabetes 360° framework.
- In August 2018, the Department of Education released Guideline for Diabetes Management in Schools.
- *P.E.I. Diabetes Strategy 2014-2017* set goals and performance measures to improve the prevention, detection, and management of diabetes, aligning itself with the principles outlined in the Diabetes Charter for Canada.
- In November 2017, blood glucose test strip coverage was increased from 100 to 250 test strips monthly through pregnancy.
- In March 2014, the insulin pump program launched for eligible individuals with type 1 diabetes under age 19 years.

Challenges

Prince Edward Island faces unique challenges in reducing risk of type 2 diabetes and meeting the needs of those living with diabetes:

- Non-modifiable risk factors of type 2 diabetes include age, sex, and ethnicity (11).
 - The median age in P.E.I. is **44.5 years** (14). **19.4%** of Islanders are over 65 years old (14). The risk of developing type 2 diabetes increases with age (11). Older adults living with diabetes are more likely to be frail and progressive frailty has been associated with reduced function and increased mortality (15).
 - Adult men are more at risk of type 2 diabetes compared to adult women (11).
 - Approximately **5.7%** of Islanders self-identify as being of African, Arab, Asian, Hispanic, or South Asian descent (14). These groups are at increased risk of developing type 2 diabetes (11).
 - There are **2,740** Indigenous Peoples in P.E.I., who face significantly higher rates of diabetes and adverse health consequences than the overall population (16). In addition to the risk factors that impact all people in Canada, the ongoing burden of colonization continues to influence Indigenous Peoples' health.
- P.E.I. has high rates of individual-level modifiable risk factors (17):
 - **42.8%** of adults and **35.6%** of youth are physically inactive;
 - **32.6%** of adults are living with overweight and **36.9%** of adults are living with obesity;
 - **81.6%** of adults are not eating enough fruits and vegetables; and
 - **12%** of adults are current tobacco smokers.
- Factors related to the social determinants of health and that can influence the rate

of individual-level modifiable risk factors among Islanders include income, education, food security, the built environment, social support, and access to health care (3).

- P.E.I. has one of the highest rural populations among the provinces. For people living with diabetes, accessing care is more challenging in rural areas across Canada than in urban areas (18).
- As with other smaller provinces, P.E.I. has difficulty in attracting and retaining specialists who are limited in numbers and on whom people with diabetes rely heavily.

Diabetes Canada's Recommendations to the Government of Prince Edward Island

1. Implement **Diabetes 360°**

- Implement a provincial diabetes strategy that aligns with the Diabetes 360° framework.
- Support the F/P/T process to establish a nationwide diabetes framework.

2. Expand access: Put patients at the centre of policy decisions

- Eliminate barriers, including age discrimination, to access evidence-based, personalized diabetes treatments, including diabetes medications, devices, and supplies.
- Provide equitable access to continuous glucose monitoring systems (isCGM & rtCGM) according to Diabetes Canada's [reimbursement recommendations](#).

3. Protect students with diabetes

- Implement a mandatory standard of care for students with diabetes that

aligns with Diabetes Canada's [*Guidelines for the Care of Students Living with Diabetes at School*](#).

4. Prevent amputations

- Implement health policies that support the prevention and management of diabetes foot complications and reduce the risk of lower limb amputations.

References

1. Canadian Diabetes Cost Model. Ottawa: Diabetes Canada; 2016. Diabetes statistics in Canada 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. 2015 Report on Diabetes – Driving Change. Ottawa: Diabetes Canada; 2015. 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 Canada, but not all. The costs are 2015 estimates and may vary depending on income and age.
3. Diabetes in Canada: Facts and figures from a public health perspective [Internet]. Ottawa: Public Health Agency of Canada; 2011 p. 126. Available from: <https://www.canada.ca/content/dam/phac-aspc/migration/phac-aspc/cd-mc/publications/diabetes-diabete/facts-figures-faits-chiffres-2011/pdf/facts-figures-faits-chiffres-eng.pdf>
4. Twenty Years of Diabetes surveillance using the Canadian Chronic Disease Surveillance System [Internet]. Ottawa: Public Health Agency of Canada; 2019 Nov. Available from: <https://www.canada.ca/content/dam/phac-aspc/documents/services/publications/diseases-conditions/twenty-years-of-diabetes/64-03-19-2467-Diabetes-Infographic-EN-11.pdf>
5. Hux J, Booth J, Slaughter P, Laupacis A. Diabetes in Ontario: An ICES Practice Atlas. Institute for Clinical Evaluative Sciences; 2003 Jun.
6. Diabetes Canada Clinical Practice Guidelines Expert Committee, Robinson DJ, Coons M, Haensel H, Vallis M, Yale J-F. Diabetes and Mental Health. *Can J Diabetes*. 2018 Apr;42 Suppl 1:S130–41.
7. Diabetes Canada Clinical Practice Guidelines Expert Committee, Altomare F, Kherani A, Lovshin J. Retinopathy. *Can J Diabetes*. 2018 Apr;42 Suppl 1:S210–6.
8. Thomas RL, Halim S, Gurudas S, Sivaprasad S, Owens DR. IDF Diabetes Atlas: A review of studies utilising retinal photography on the global prevalence of diabetes related retinopathy between 2015 and 2018. *Diabetes Res Clin Pract*. 2019 Oct 23;107840.
9. Singh N, Armstrong DG, Lipsky BA. Preventing Foot Ulcers in Patients With Diabetes. *JAMA*. 2005 Jan 12;293(2):217–28.
10. Denny K, Lawand C, Perry SD. Compromised Wounds in Canada. *Healthc Q [Internet]*. 2014 May 16 [cited 2021 Oct 12];17(1). Available from: <https://www.longwoods.com/content/23787/healthcare-quarterly/compromised-wounds-in-canada>
11. Diabetes Canada Clinical Practice Guidelines Expert Committee. Diabetes Canada 2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada. *Can J Diabetes*

- [Internet]. 2018 [cited 2019 Oct 28];42. Available from: <http://guidelines.diabetes.ca/docs/CPG-2018-full-EN.pdf>
12. Public Health Agency of Canada, Pan - Canadian Public Health Network, Statistics Canada, Canadian Institute of Health Information. Pan-Canadian Health Inequalities Data Tool, 2017 Edition [Internet]. Public Health Agency of Canada. 2019 [cited 2019 Oct 31]. Available from: <https://health-infobase.canada.ca/health-inequalities/data-tool/>
 13. The burden of out-of-pocket costs for Canadians with diabetes. Ottawa: Diabetes Canada; 2011. 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.
 14. Prince Edward Island [Province] and Canada [Country] (table). Census Profile. 2016 Census [Internet]. Ottawa: Statistics Canada; 2017 Nov. Report No.: Statistics Canada Catalogue no. 98-316-X2016001. Available from: <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E>
 15. Diabetes Canada Clinical Practice Guidelines Expert Committee, Meneilly GS, Knip A, Miller DB, Sherifali D, Tessier D, et al. Diabetes in Older People. *Can J Diabetes*. 2018 Apr;42 Suppl 1:S283-95.
 16. 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/hlt-fst/abo-aut/Table.cfm?Lang=Eng&S=99&O=A&RPP=25>
 17. Statistics Canada. Health characteristics, annual estimates [Internet]. 2020 [cited 2021 Oct 20]. Available from: <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1310009601>
 18. Table 17-10-0118-01 Selected population characteristics, Canada, provinces and territories [Internet]. Ottawa: Statistics Canada; 2019 Dec. Available from: <https://doi.org/10.25318/1710011801-eng>