

Summary Report

Distribution of Disease Burden and
Healthcare Resource Utilization
Associated with Diabetes and
Cardiovascular Conditions in New
Brunswick

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The results and conclusions are those of the authors, and no official endorsement by the Government of New Brunswick, the other listed data business owners, the McKenna Institute, Shoppers Drug Mart, RNB, or the MSSU and its associated funders was intended or should be inferred.

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Why is This Study Important?

Of all the Canadian provinces and territories, New Brunswick (NB) has the highest prevalence of diabetes, high blood pressure, heart disease, and stroke.¹ In other words, the percentage of people living with these conditions is higher in NB than anywhere else in Canada.

While these chronic diseases pose a health risk to individual New Brunswickers, the large share of them in the province also places a strain on the healthcare system, making it more difficult for doctors to keep up with demand and for patients to get the consistent care they need.

This study aims to help support the province's capacity to manage chronic disease by providing valuable information on the distribution of diabetes and cardiovascular disease – that is, conditions of the heart and blood vessels – across NB.

It uses linked administrative data to look at which regions of NB, and which population groups, have the largest share of diabetes, heart disease, heart failure, hypertension, heart attack, and stroke. It also compares outcomes and health service use across regions and across populations that share similar characteristics. This includes looking at rates of death, emergency department (ED) visits, hospital admissions, physician visits, use of physician services, Tele-Care calls, blood tests (and results), and participation in the NB Insulin Pump Program.

This is the first study in NB to examine chronic disease patterns at the population level with such detailed breakdowns. For the decision makers tasked with improving the province's chronic disease response, this study provides important information on which groups carry the greatest burden of disease, and where the healthcare system is facing the most demand. In the end, the results are expected to lead to more in-depth research in this area, and to inform the development of policies and initiatives to support people living with chronic illnesses – improving daily life for those faced with ongoing health issues.



How Was This Study Completed?

To undertake this study, we used multiple linked administrative data sets accessed through NB-IRDT, listed in the [full report](#). These include information on New Brunswickers' chronic disease diagnoses, use of various healthcare services and programs, health outcomes, demographics, and more. Additional data were sourced from Statistics Canada's 2016 Census of Population.

This study examines the distribution of diabetes and cardiovascular disease and associated healthcare resource utilization among NB's entire adult population each year between 2014 and 2018 (and more recent years as data allow). The outcomes mentioned on the previous page (which are described in detail in the [full report](#)), are reported at the provincial level, and results are further broken down geographically (by NB Health Council Communities, which divide the province into 33 smaller regions) and by several sociodemographic factors. These include age, sex social assistance use, immigration status, rurality, attachment to primary care provider, household composition, travel distance to nearest healthcare center, long-term care client status, household income, material deprivation, and English/French language preference.



Limitations

While reading the results on the next pages, it's important to remember there are limitations to this study. For instance, at the time of the study, some data were only available until 2018, so findings are not recent and should be updated as more current data become available.

Because our study was meant to give a broad picture of how disease and healthcare use vary in the real world, we didn't adjust the data to account for differences in age or sex between regions or groups. We also didn't use statistical tools to control for other factors that might influence results, like income or education. In future, research should explore these findings further by using methods like age-/sex-standardization and statistical models to better understand why certain areas or groups show higher rates of diabetes and cardiovascular disease and associated health service utilization.

Diabetes and Cardiovascular Disease Across NB in 2018

Among NB's 33 Health Council Communities

Chronic disease prevalence rates in Dalhousie and Minto were among the highest for 5 of the 6 conditions examined.

Mortality was highest in Kedgwick and St. Stephen.

↳ Kedgwick had a particularly high mortality rate among the diabetic population.

ED visit rates were also highest in Kedgwick.

Hospital admissions were generally highest in the Campbellton, Dalhousie, and Edmundston regions.



What characteristics are related to poor outcomes?

Older age and lower socioeconomic status

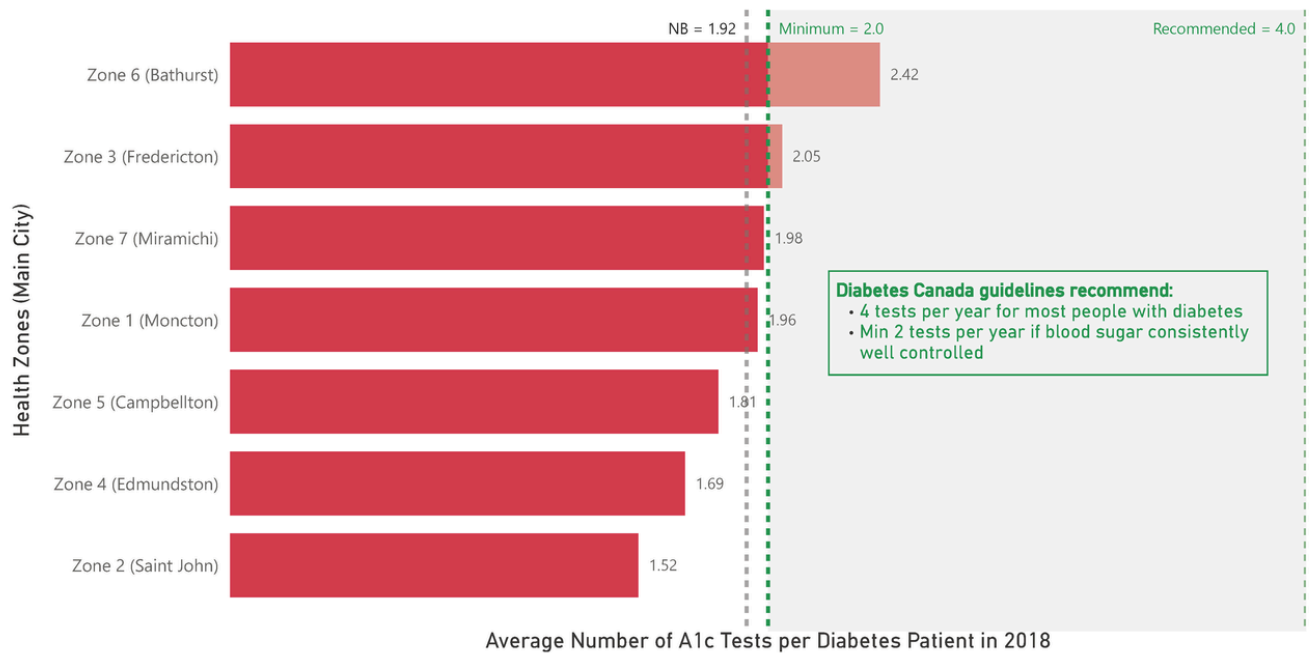
Increased rates of chronic disease prevalence, mortality, hospital admission *and* ED visits were all associated with older age and with markers of lower socioeconomic status – such as lower household incomes and history of social assistance use.

Reduced access to care

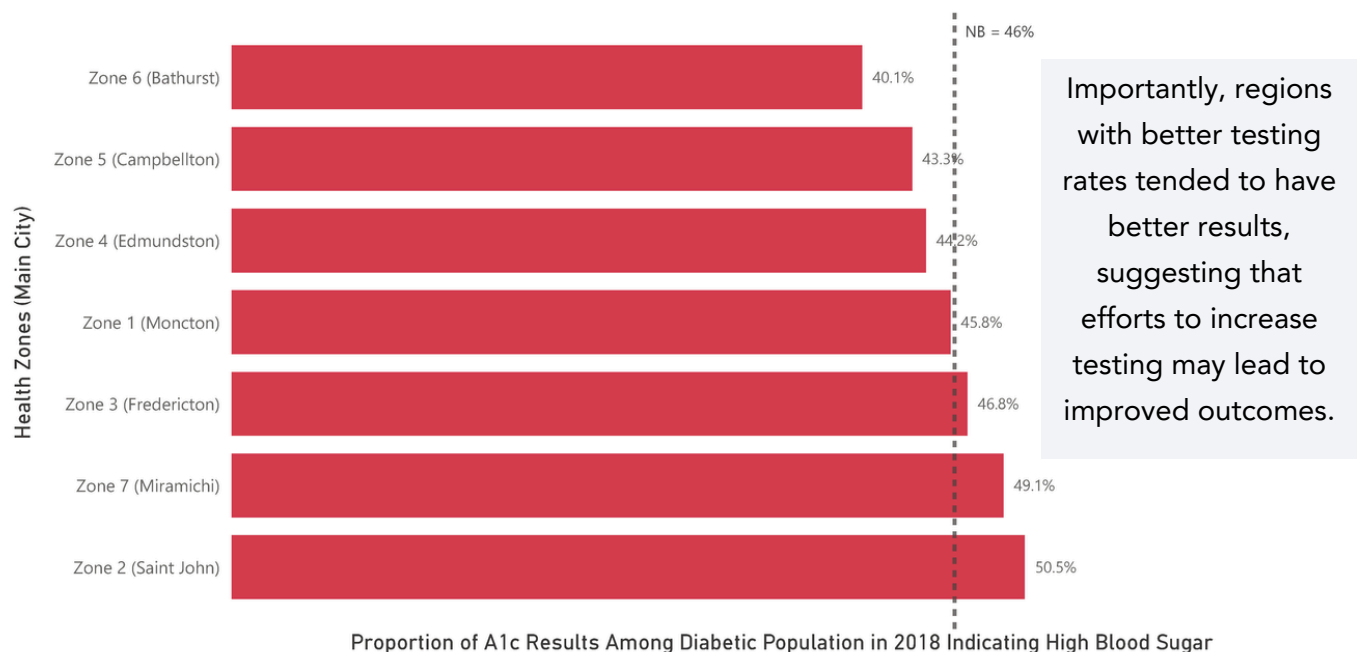
Rates of mortality, hospital admission, and ED visits were generally higher in regions identified in previous studies as having reduced access to primary care

Blood Sugar Monitoring and Glycemic Control (2018)

➔ We found that NB residents with diabetes do not have their blood sugar (A1c) tested often enough. This is the case for each of NB's 7 Health Zones.



➔ Nearly half of A1c results among diabetic patients in NB showed that blood sugar was too high – which means a greater risk of potentially serious complications.



Outcomes Among Undiagnosed New Brunswickers

Some New Brunswickers have diabetes and/or cardiovascular conditions without knowing it – and they're experiencing negative outcomes related to their undiagnosed conditions.

➔ This is especially true of undiagnosed cardiovascular issues:



1,830 New Brunswickers

died of cardiovascular-related causes in 2018
(25% of all deaths)



245 (more than 1 in 10) of those
who died did not have
a previous cardiovascular diagnosis

Meanwhile, 6% of those who died of diabetes-related causes did not have a previous diabetes diagnosis. Similar percentages of cardiovascular-related (17%) and diabetes-related (8%) ED visits were among undiagnosed individuals.

Potential missed opportunities for managing chronic disease

- Negative health outcomes among undiagnosed individuals represent potential missed opportunities for early detection and preventive care.
- We also found that socially disadvantaged groups had lower rates of enrolment in the NB Insulin Pump Program, which provides financial assistance for insulin pump users. This suggests the program may not be reaching those who need it most, possibly due to barriers in awareness and/or access.

Conclusions

Although NB has a high prevalence of diabetes and many cardiovascular conditions, not all areas of the province are affected equally. By showing which regions carry the highest burden of disease – and what population characteristics are more common in those regions – this study helps highlight where resources for managing chronic disease could have the greatest impact.

Our results also identified some key areas for improvement in chronic disease management at the provincial level. For instance, in every region of the province, people with diabetes had their blood sugar control monitored less often than recommended, and test results frequently indicated that their blood sugar was too high. Results were generally better in regions that tested more often (a finding consistent with previous studies), suggesting that initiatives aimed at increasing testing frequency may lead to improved health outcomes.

One surprising finding was that people from socially disadvantaged groups had lower enrolment in the NB Insulin Pump Program. This was unexpected, given that the program offers financial support to help people afford the supplies they need to manage their diabetes. Since poor health outcomes are more common in communities facing social and material disadvantage, it may be important to assess whether this program is effectively reaching those who need it most.

References

1. Statistics Canada. *Health of Canadians: health outcomes* [Internet]. Statistics Canada; 2023 [cited 2025 Apr 15]. [Table 3.0: Prevalence of common chronic conditions among Canadians, by province \(2021\) or territory \(2017 and 2018\).](#)



Questions?

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