VANCOUVER

Vancouver, Canada

LOCAL PROGRAMME PARTNERS

- City of Vancouver
- Vancouver Coastal Health
- Diabetes Canada
- Simon Fraser University

EXPLORING THE PRIORITIES, CHALLENGES AND UNMET NEEDS IN TYPE 2 DIABETES

When you think of healthy and liveable cities, Vancouver often comes to mind. In fact, it is consistently named as one of the world's top five cities for liveability and quality of life.[73] Along with Copenhagen, it was listed as one of the world's 10 healthiest cities in 2014.[23] You might imagine that Vancouverites stay healthy simply due to the draw of the beautiful outdoors and abundant green spaces. However, the City of Vancouver has also played an important role in building a city that promotes healthy living. Unlike its North American counterparts, Vancouver is the only major city in North America without an interstate running through it. Instead, about one-third of Vancouverites opt to commute by walking, taking public transportation or utilising the miles of bicycle lanes available to them.[74]

Vancouver's focus on healthy living has given the city a head start in addressing the growing burden of diabetes and obesity faced by many cities. In fact, Vancouver's obesity rate, at 15.0%,[75] is one of the lowest rates in Canada[76]. However, even in Vancouver, where physical activity and a healthy outlook are strong components of society, diabetes holds an increasingly strong grip. According to Cities Changing Diabetes research, 9.4% of Vancouver's population is living with diabetes, which is on a par with Canada's national prevalence of diabetes.[77] The Diabetes Projection Model shows that diabetes prevalence among adults could increase to 11.7% if action is not taken (Figure 9).[78]

As in other cities, the diversity of Greater Vancouver's population poses an array of challenges concerning diabetes risk and management. Vancouver is a highly diverse city, with 45.0% of the population speaking a first language other than English.[79] People of Chinese, South Asian and indigenous ethnicity – some of Vancouver's most populous ethnic groups – have a disproportionate level of risk compared to people of European ethnicity with the same BMI.[80] Some neighbourhoods in Vancouver are also disproportionately impacted by type 2 diabetes, with the more affluent Westside of Vancouver having a diabetes prevalence of only 5.0%, whereas the Downtown Eastside and South have a prevalence as high as 8.0% and 11.0% respectively.[77] Preventing, diagnosing and managing diabetes in Vancouver, therefore, requires a more holistic understanding of why certain groups are potentially more vulnerable to developing type 2 diabetes.

PILOTING A NEW RESEARCH TOOL TO ASSESS LOCAL SOCIOCULTURAL FACTORS OF DIABETES

Although there is a substantial knowledge base regarding biomedical and certain socioeconomic factors related to diabetes and its outcomes, sociocultural factors have yet to be comprehensively and systematically explored.

Vancouver is the pilot site for the newly developed Urban Diabetes Risk Assessment. The tool utilises an innovative, mixed-methods approach in order to identify distinct participant sub-groups that share specific priorities and attitudes towards health, well-being and living with diabetes. Building on the Diabetes Vulnerability Assessments carried out by Cities Changing Diabetes in five cities, the research seeks to expand the global evidence base around the sociocultural drivers of urban diabetes.

In Vancouver, the study will recruit 60 people with type 2 diabetes, leveraging two existing population-based studies. A key objective for the researchers is to ensure that the sample represents the diverse population living in Vancouver. This means that participants are purposely recruited from a range of population sub-groups.

A major portion of the data collection happens via an online software application tailored to the needs of Cities Changing Diabetes. In Vancouver, the global and local programme partners have worked to fine-tune the software and ensure ease of use for study participants. This will not only lay the foundation for a successful pilot in Vancouver, but it will also serve as a model for other cities using the tool.

Following the online data collection, the researchers will further explore the findings through citizen engagement. Focus groups or workshops will be used as a unique opportunity for people with type 2 diabetes to play a role in co-creating solutions to address the challenge of diabetes in their city.

Preparing for the pilot has been a highly collaborative process involving University College London and Simon Fraser University as academic leads, along with local partners, including the City of Vancouver, Diabetes Canada and Vancouver Coastal Health.

> *"It definitely has been a real team effort in getting this ready for roll-out, so the most important learning is working in partnership with all players."*
>
> **VERONICA DE JONG, RESEARCH COORDINATOR, SIMON FRASER UNIVERSITY**

Ultimately, the tool is about generating results that can guide a targeted intervention platform around reducing diabetes prevalence and improving management of the condition. In a city such as Vancouver, where there are already several ongoing initiatives, the findings will help to elevate the impact of these initiatives and ensure that they are tailored to the actual needs of various groups of people.

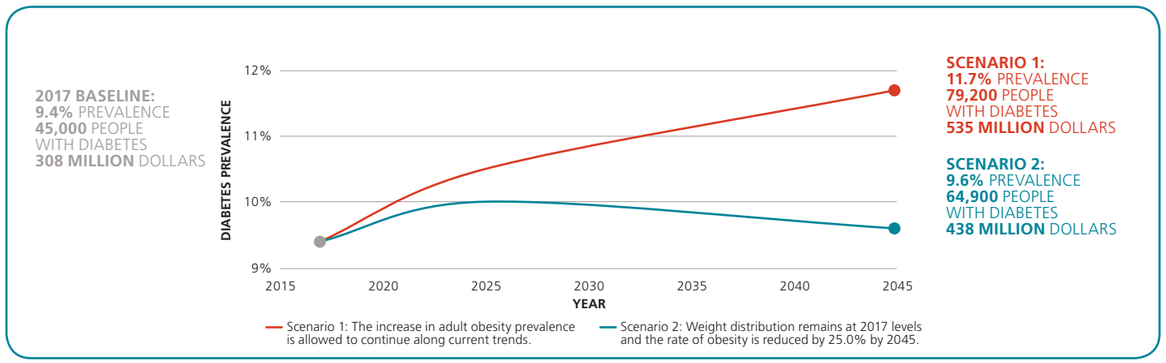
Sharing knowledge between cities

As the seventh city to join Cities Changing Diabetes, Vancouver has the advantage of building on knowledge generated across other cities, specifically on how to engage effectively with stakeholders around research and action. In the spirit of partnership and collaboration, Vancouver will also collaborate with academics in Houston and Mexico City in the Healthy Cities Research Hub.

THE PREVALENCE OF MULTIPLE CHRONIC CONDITIONS IS **FOUR TIMES HIGHER** AMONG PEOPLE WITH LESS THAN A HIGH-SCHOOL DEGREE, AND **THREE TIMES HIGHER** IN HOUSEHOLDS WITH AN ANNUAL INCOME OF BELOW 40,000 CANADIAN DOLLARS PER YEAR.[75]

FIGURE 9: PROJECTED DIABETES PREVALENCE IN VANCOUVER, 2017–2045 (ADULTS AGED 20–79)[78]

If we reduce obesity by 25.0% by 2045, almost 14,300 cases of type 2 diabetes can be avoided and 97 million US dollars in healthcare expenditure saved



NOTE: The baseline prevalence of 9.4% among adults (aged 20–79) in 2017 uses Rule of Halves research conducted in Vancouver in 2017.[77] The model uses the age distribution for British Columbia and published BMI data.