DIABETES CANADA

DIABETES CANADA PRESENTS:

ATLANTIC CANADA HEALTH EQUITY SUMMIT

Conference Report

OCTOBER 2, 2024 • HALIFAX, NOVA SCOTIA

Acknowledgements

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Sustaining Momentum in Implementing the Diabetes Framework (SMIDF) Team

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Supporters and Conference Organization

The Diabetes Canada Atlantic Health Equity Summit was made possible through the support and funding provided from the Public Health Agency of Canada and Diabetes Canada for the *Sustaining Momentum to Implement the Diabetes Framework: Convening Stakeholders to Share Strategies and Best Practices to Address Treatment and Health Equity Gaps in Diabetes Prevention and Care* Project.

Support from the Government of Nova Scotia was critical to the development and success of the Diabetes Canada Atlantic Health Equity Summit. We thank and acknowledge Laura Wentzell, Director of Primary and Urgent Care for the Government of Nova Scotia for her support in the delivery of the Summit. Additionally, the Health Association of African Canadians, a Nova Scotia health association, was key in providing expertise in the development and feedback for the event. We thank members Shelley Fashan (Director, Community Engagement), and Soliel Gibson (Administrative and Project coordinator) for their support.

Presenters for the Diabetes Canada Atlantic Health Equity Summit supported fundamental learnings in the intersection of diabetes care and health equity. Presenters dedicated their time, energy, and resources to sharing their knowledge and experiences with summit attendees to further equitable diabetes care. In presenting order, we thank and acknowledge the following individuals for their contributions:

Adria Cehovin – Diabetes Canada
Rebekah Quach – Government of Nova Scotia (NS)
Jalal Uddin – Dalhousie University
Beth Cummings – Dalhousie University, Diabetes Care Program of NS
Erin Pichora – Canadian Institute for Health Information
Julia Bannister – Wise Choice Counselling
Heather Power – Newfoundland and Labrador (NL) Health Services
Damilola Iduye – Dalhousie University, Black Nurses Association of NS

Note on Indigenous Engagement and a National Diabetes Framework

In respect to Reconciliation and in recognition of Indigenous autonomy, self-determination, and sovereignty, the Public Health Agency of Canada has provided independent funding to the National Indigenous Diabetes Association (NIDA). NIDA is engaging with various Indigenous peoples, nations and organizations across Canada to develop an Indigenous Diabetes Framework. Through supporting open dialogue, NIDA sits on the Diabetes Canada/SMIDF's Pan-Canadian Action for Diabetes committee to promote mutual knowledge exchange and collaboration. For more information about NIDA, please visit www.nada.ca

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1.0 Executive Summary

On October 2nd, 2024, Diabetes Canada, with support from the Public Health Agency of Canada, held the first ever Atlantic Canada Diabetes Health Equity Summit, in Halifax, Nova Scotia. With emphasis on supporting momentum for the Diabetes Framework in Canada, the event aimed to bring the principle of health equity to the forefront of conversations around diabetes care, prevention, access, and management. 46 participants from across New Brunswick (NB), Newfoundland and Labrador (NL), Nova Scotia (NS), and Prince Edward Island (PEI), attended the summit, including:

- provincial government bureaucratic staff and officials;
- healthcare professionals;
- diabetes researchers;
- health equity researchers/advocates;
- non-governmental organizations (NGOs);
- advocates/individuals with lived experience;

In addition to supporting knowledge sharing around the Framework for Diabetes in Canada, the event aimed to support attendees in engaging with topics in health equity and diabetes by:

- Bringing the principles of health equity to the forefront of discussions around diabetes
- Providing a space for multi-sectoral stakeholders to share their successes and challenges in applying the principles of health equity to their work in the healthcare and diabetes care sector
- Exploring barriers to understanding, diagnoses, prevention and care in Social Determinants of Health-impacted and health-equity deserving communities
- Discussing and creating actionable next steps to applying a health equity systems level approach to all diabetes initiatives and programs

Presentations from the conference explored diverse topics on equitable diabetes care in Atlantic Canada including, the impact of universal continuous glucose monitor (CGM) access in pediatric clinic settings, the impact of food insecurity on caregivers of children with type 1 diabetes (T1D), equity in diabetes-associated lower limb amputations, type 2 diabetes (T2D) in Black Canadian populations, and more. During group discussions, attendees overwhelmingly shared the need for collaboration among government, community partners, and healthcare professionals, investment and expansion of medication and device funds, and support for patient navigation of complex care systems. Continued collaboration and the establishment of structured partnerships across the Atlantic provinces were also highlighted as necessary to support the Framework's goal of applying the cross-cutting principle of health equity to diabetes care initiatives.

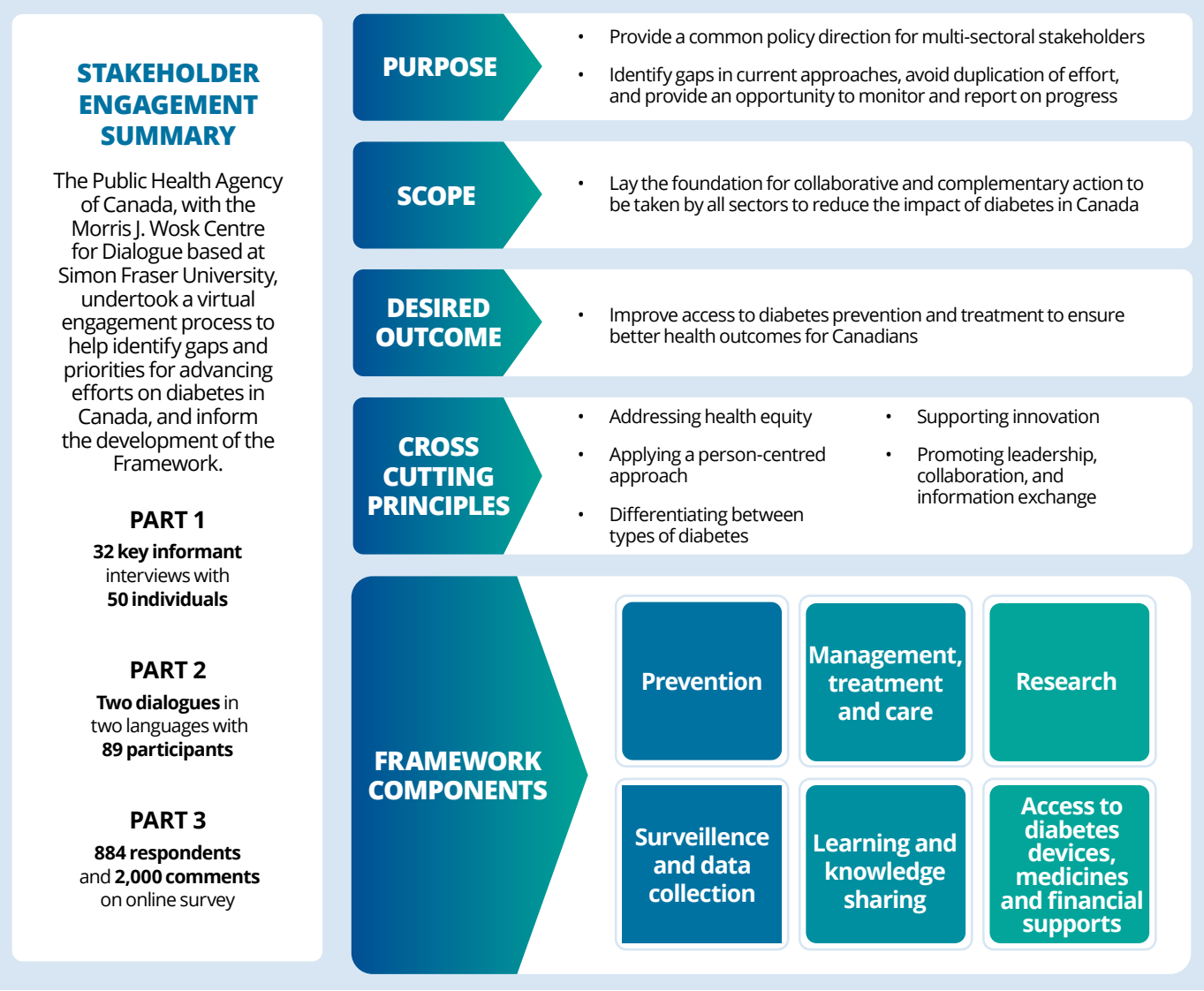
2.0 The Framework for Diabetes in Canada and SMIDF Overview

Diabetes Canada is a national health charity representing more than four million people in Canada living with diabetes. Diabetes Canada leads the fight by helping those affected by diabetes live healthy lives and addressing the onset and consequences of diabetes. In partnership with the Public Health Agency of Canada (PHAC), Diabetes Canada is engaging in a three-year project, Sustaining Momentum to Implement the Diabetes Framework (SMIDF). The Diabetes Framework, officially referred to as the Framework for Diabetes in Canada, was presented by the Government of Canada in 2022. The Diabetes Framework aims to support diabetes risk reduction, management, treatment, and care, and provides a common policy direction to address diabetes in Canada (PHAC, 2022). The Diabetes Framework also supports the identification of gaps in current diabetes care approaches, promotes reducing duplication of effort, and provides the federal government an opportunity to monitor and report on progress (PHAC, 2022). The Diabetes Framework is comprised of six interdependent and interconnected components of diabetes efforts including;

- Prevention,
- Management, treatment, and care,
- Research,
- Surveillance and data collection,
- Learning and knowledge sharing, and,
- Access to diabetes devices, medicines, and financial support.

A summary of the Framework for Diabetes in Canada is provided in Figure 1.

Figure 1: Visual of the Framework for Diabetes in Canada (PHAC, 2022)



The SMIDF teams foci relates to regional engagement initiatives with the Diabetes Framework and the creation of an inventory of successful diabetes programs, interventions, and projects across Canada. The creation of the inventory will also involve the dissemination of findings for adoption and scaling to identify and share best practices for addressing diabetes, including the identification of actions to reduce barriers to diabetes care in health-equity deserving communities.

3.0 About the Conference

A cross-cutting principle of the Diabetes Framework is addressing health equity in relation to diabetes care and management. Health equity is recognized as a state where all individuals are able to reach their full health potential, with fair and just opportunities to access healthcare resources (CDC, 2022). To achieve health equity, significant work is necessary at the systems level to critically analyze, understand, and remove barriers to care. This includes addressing the root causes of the social determinants of health (SDOH), rather than focusing solely on mitigating the effects (Hill-Briggs et al., 2021). For diabetes care, this means reducing the impact on diabetes outcomes of poor socioeconomic status, neighborhood and physical environments, food environments, healthcare, and social contexts. (Hill-Briggs et al., 2021). Deeply rooted discriminatory policies, practices, and services embedded throughout our healthcare system can exacerbate risks and symptoms associated with diabetes. Therefore, an approach to diabetes care and management that recognizes the intersections of marginalization and inequity across Canada and directly targets the root causes of the SDOH, is necessary to support patient-centered change that is available and accessible to all.

As a systems-level problem, discussions around health equity and inequity require insight, advocacy, and collaboration from all sectors that passively or actively engage with the healthcare system (Glasgow et al., 1999). Factors that support and interfere with diabetes care management and treatment include, but are not limited to, personal influence, access to healthcare providers/systems, and regulations and policies at the government level (Glasgow et al., 1999). Thus, meaningful discussion around change and action for the state of diabetes care in Canada requires multi-sectoral engagement and collaboration. The **Atlantic Canada Diabetes Health Equity Summit**, held on October 2nd, in Nova Scotia, aimed to support this objective. Forty-six participants attended the summit, including:

- provincial government bureaucratic staff and officials;
- healthcare professionals;
- diabetes researchers;
- health equity researchers/advocates;
- non-governmental organizations (NGOs);
- advocates/individuals with lived experience;

Objectives of the Atlantic Canada Diabetes Health Equity Summit included:

- Bringing the principles of health equity to the forefront of discussions around diabetes through information-sharing and relationship-building with experts in the field of diabetes and/or health equity
- Providing a space for multi-sectoral stakeholders to share their successes and challenges in applying the principles of health equity to their work in the healthcare and diabetes care sector
- Discussing and creating actionable next steps for applying a health equity systems level approach to all diabetes initiatives and programs as related to the Framework

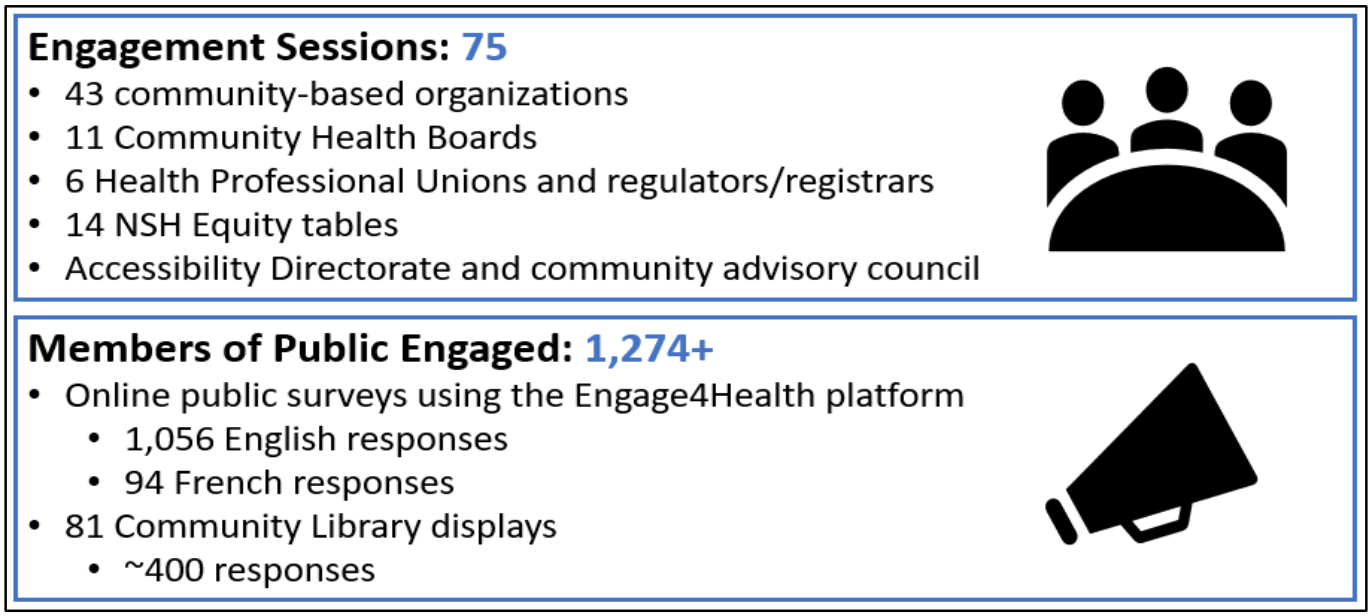
4.0 Conference Presentations

To support the objectives of the Atlantic Canada Diabetes Health Equity Summit, invitations for attendance also included requests for presenters. All potential attendees were invited to present their findings or experiences working on or developing a health-equity approach to diabetes risk reduction, care, management, or access. Additionally, an overview of the Framework for Diabetes in Canada and the SMIDF project was provided by SMIDF Project Manager, Adria Cehovin. After the presentations, attendees broke out into smaller groups for case-study discussions. Outcomes and reflections from the small group discussions and reflections are explored in Section 5.

4.1 Rebekah Quach – Nova Scotia Health Equity Framework: An Overview

Rebekah Quach, a Senior Strategist for the Equity and Engagement Division at the Nova Scotia Department of Health and Wellness, shared how advocacy and action for health equity can be implemented at the government level, through the exploration of Nova Scotia's Health Equity Framework. The idea for the development of a Health Equity Framework arose when engagement sessions through the province's Equity and Anti-Racism office for the creation of the Dismantling Racism and Hate Act (DRHA) alerted the team to the deep-rooted and significant issues with racism and discrimination in the healthcare system. Thus, the DRHA called upon the Nova Scotia Government to develop and implement a health equity framework. Community engagement efforts for the development of the framework are outlined in Figure 2.

Figure 2: Engagement Outcomes for the Development of the Nova Scotia Health Equity Framework



Three key themes emerged from the initial engagement sessions, and follow-up 'validation' sessions which aimed to share and confirm what was learned while also identifying any feedback that was missed (Government of Nova Scotia, 2023).

1. **Past Experiences**
   Individuals from underserved and underrepresented communities reported feeling unsafe using the health-care system due to issues of bias, stigma, prejudice, and a lack of cultural awareness. Individuals reported safety concerns ranging from being the target of verbal abuse to having difficulty accessing safe and accurate care (Government of Nova Scotia, 2023). Notably, physical, attitudinal, and overall safety was a concern for both patients and healthcare workers.

2. **Health Human Resources**
   Concerns about the diversity of the health-care system workforce were shared, especially in relation to the discrepancies in diversity in leadership versus the population served. As well, concerns around a lack of capacity for cultural competency, person and family-centred care, and the principles of Equity, Diversity, Inclusion, Reconciliation, and Accessibility (EDIRA), were raised.

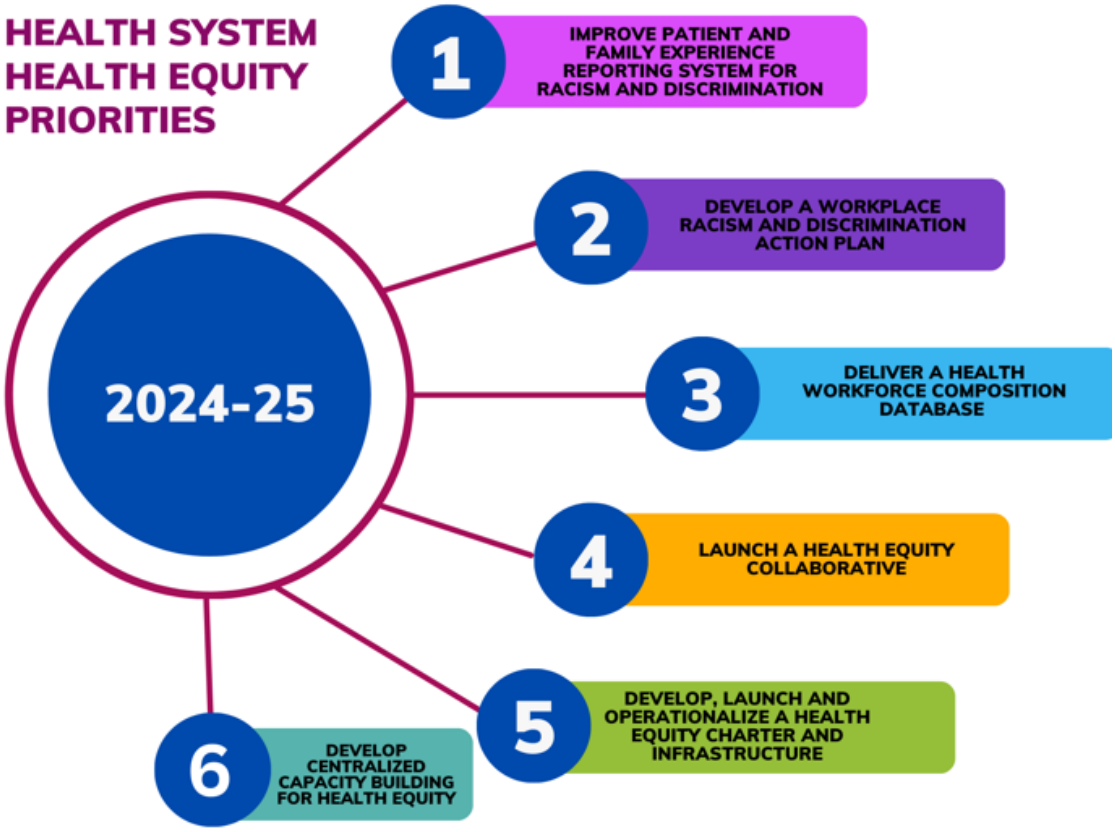
3. **Health System Policy and Practices**
   A lack of engagement with health system users was continuously raised as a key concern, with participants sharing that their input is often not sought or gathered in the development of health policies and services. Improved mechanisms to collect better race and diversity data are needed to support accountability in the health-care system and inform future planning decisions. One suggestion for this work may be to explore recent developments by the Manitoba government in implementing the collection of self-declared race-based data from patients across the province (Shared Health Manitoba, 2023).

The Health Equity Framework developed by the Nova Scotia Government took into consideration these 3 key themes to create 35 actions that need to be taken by and across the province to support and advance health equity. The implementation of the framework requires a critical mass of partners in the health system to support and integrate the calls to action, but also have the tools, supports, and resources necessary to achieve equity-focused change. Six foundational initiatives to enable the health care system to embed equity are being collectively prioritized by the Department of Health and Wellness's system partners (Figure 3). **System partnerships are crucial to the success of the framework implementation, as a multi-sectoral approach can:**

- **Enhance and increase capacity**
- **Strengthen accountabilities**
- **Secure commitment from leaders**
- **Generate evidence to support analysis and decision-making**
- **Create opportunities and accountabilities for community engagement**
- **Support innovation and input.**

To learn more about the Nova Scotia Health Equity Framework, visit www.engage4health.ca/dhw-health-equity-framework.

Figure 3: Health System Health Equity Priorities for the Nova Scotia Health Equity Framework



4.2 Jalal Uddin – Diabetes prevalence and related care in middle-aged and older Canadians: A decomposition analysis.

With the aim to inform clinical and social policy interventions in relation to the diabetes care for immigrants in Canada, Jalal Uddin and his research colleagues, Emran Hasan and Susan Kirkland, examined the immigration status differences in achievement of lifestyle and clinical targets among participants with diabetes. Using the Canadian Longitudinal Study on Aging (CLSA), which tracks around 50,000 Canadians (aged 45 to 85 at recruitment) for 20 years, Uddin and his team analyzed the available biological, medical, psychological, social, lifestyle and economic data available for the 4,357 adults who self-reported having diabetes. The analysis performed by the research team explored key lifestyle and clinical targets, including smoking status, weight (sex-specific waist circumference), physical activity levels, average blood sugar levels over the past 2-3 months (A1C), blood pressure, and cholesterol. Variables of interest included socioeconomic status, psychosocial factors, neighborhood/area-level factors, and demographics (including age, sex, race, marital status, and rurality). Using a logistic regression model, and sequentially adjusting for the above covariates, the descriptive statistics by immigration were explored.

Due in part to limitations in the study population itself, including the inability to include the length of residence for immigrants in the analysis because of the lack of immigration status representation in the study population, the results cannot be widely generalized. However, a marginally significant relationship was observed in the study between immigrant status and A1C levels higher than 8%, highlighting the need for further research to explore what barriers may exist in preventing the maintenance of in-target A1C levels in immigrants in Canada living with diabetes. As well, the smaller sample size of immigrant participants living with diabetes in the study population prevents further meaningful analysis of understanding the relationship between diabetes and immigration status by country, adding an additional limitation to be further explored in future studies. One summit participant also raised the important consideration that studies focusing on populations that self-report having diabetes may miss individuals in the population who have diabetes but are unaware of their condition. Uddin and his team hope to further explore some of these considerations in future reviews and analysis.

4.3 Beth Cummings – Food Insecurity in Diabetes: Caregiver Perspectives on the Burden, Screening and Support

Food insecurity is the inadequate access to sufficient, safe, and nutritious food, and can compromise management of type 1 and type 2 diabetes (Diabetes Canada, 2020). In Canada, food insecurity impacts 1 in 4 children and is associated with negative health outcomes and higher health care costs to families (Li et al., 2023). Prevalence of household food insecurity by province is high in Atlantic Canada, and compounded with diabetes, can increase adverse health outcomes. Beth Cummings spoke to the prevalence of food insecurity in families with children with insulin-requiring diabetes, highlighting the caregiver perspectives on burden, screening, and support. Prevalence of food insecurity in Nova Scotia for families with a child living with insulin requiring diabetes was found in 2011 to be higher than the provincial and national average, and is associated with higher A1C levels, increased hospital admissions, less insulin pump usage, and reports of reusing needles to save on costs (Marjerrison et al., 2011). A recent study by Gupta & Sheng (2019) confirmed many of these findings at a national scale, highlighting how patient experiences with food insecurity significantly increase the odds of hospital admission for ambulatory care among Canadians living with diabetes.

To better understand the impact of food insecurity on caregivers of children with type 1 diabetes (T1D), Cummings shared findings from a study completed by Cox et al. (2021) that aimed to:

- Describe the impact of food insecurity on the family's life and management of diabetes
- Explore caregivers' perception of the barriers to food security
- Explore caregivers' ideas of ways that their families may be better supported.

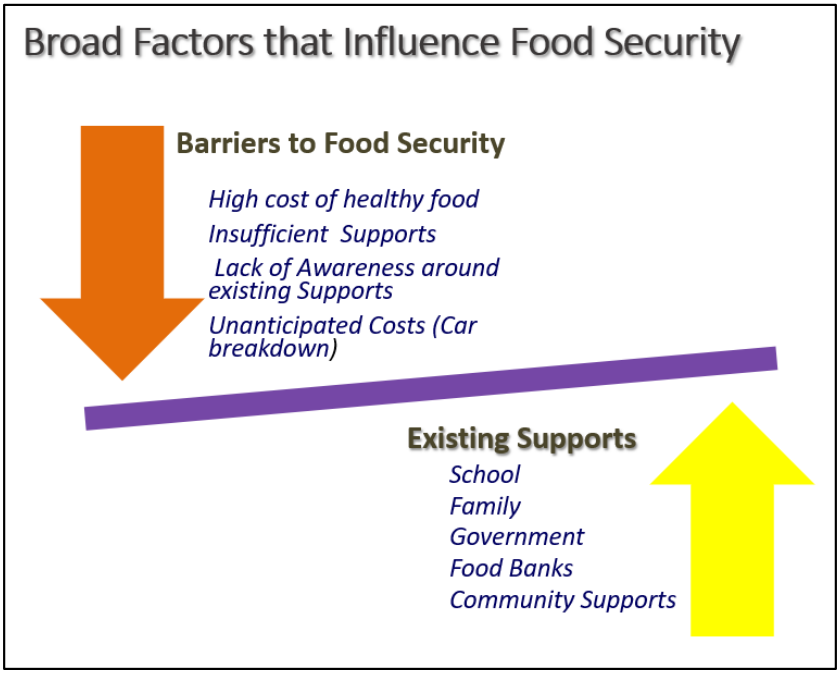
Through one-on-one semi-structured interviews, the research team engaged with 13 caregivers at a pediatric diabetes clinic in Nova Scotia. Three key themes emerged from the interviews (Cox et al., 2021):

1. Food insecurity had a disproportionate impact on homes where a child has T1D
2. Sacrifices to combat food insecurity has a disproportionate impact among family members
3. Caregivers perceived barriers to accessing the usual supports that exist to combat food insecurity

Factors that influence food security that were identified through qualitative interviews are shown in Figure 4. While supports exist that can counteract and reduce the burden of many of the barriers to food security, the additional factors and barriers associated with caring for a child with diabetes in Canada can weaken

and reduce existing supports, increase barriers, and overall compromise a family's ability to maintain food security. Sacrifices that are made by caregivers to afford care for their children with diabetes requiring insulin include making cuts to grocery bills, going without transportation, making cuts to basic needs, and not being able to afford household bills (Cox et al., 2021). The study highlights the need for diabetes specialists to not only be able to identify food insecurity within their patient population, but also advocate for improved resources and support for impacted families (Marjerrison et al., 2011). Based on this work, McNeil and Cummings have conducted focus groups and surveys to explore how screening and support should occur within a clinic setting. **Families agreed that the screening process around identifying food insecurity in a clinic setting must be accessible and consistent, so that families can feel comfortable asking for help, and clinics can provide the appropriate supports required. They welcomed the development of a toolkit to include financial programs, recipes and meal plans cooking workshops, supply samples, support groups and access to local programs.**

Figure 4: Broad Factors that Influence Food Security for Families accessing a Pediatric Diabetes Clinic in Nova Scotia (Cox et al., 2021)



4.4 Erin Pichora – Equity in Diabetes Care: A Focus on Lower Limb Amputation

Erin Pichora, program lead with the Population Health team at the Canadian Institute for Health Information (CIHI), provided an overview of CIHI's recently published report, **Equity in diabetes care: A focus on lower limb amputation** (2024). The report examines Canadian hospitalization data from 2020 to 2022, focusing on leg amputations associated with diabetes among adults (age 18 and older). The team focused on lower limb amputations because these complications are largely preventable and carry high health system and societal costs. Recent literature also suggests that rates of diabetes-associated lower limb amputations may be increasing, and that there are gaps in healthcare services associated with income and geography (CIHI, 2024).

Figure 5 highlights annual costs and counts for lower limb amputations and hospitalizations for ulcers, gangrene and infection. Together, the costs for these hospitalizations exceed $750 million each year. Analysis by age showed that 43% of diabetes-associated lower limb amputations in Canada occurred in 40–64-year-olds (CIHI, 2024). As well, individuals living with type 1 diabetes were more likely to require lower limb amputation at an earlier age, compared with individuals living with type 2 diabetes (CIHI, 2024). Leg amputations were also analyzed by sex and neighborhood income, and the results showed large inequalities by both factors.

Figure 5: Hospitalizations rates and hospital costs for lower-limb amputations associated with diabetes (CIHI, 2024)

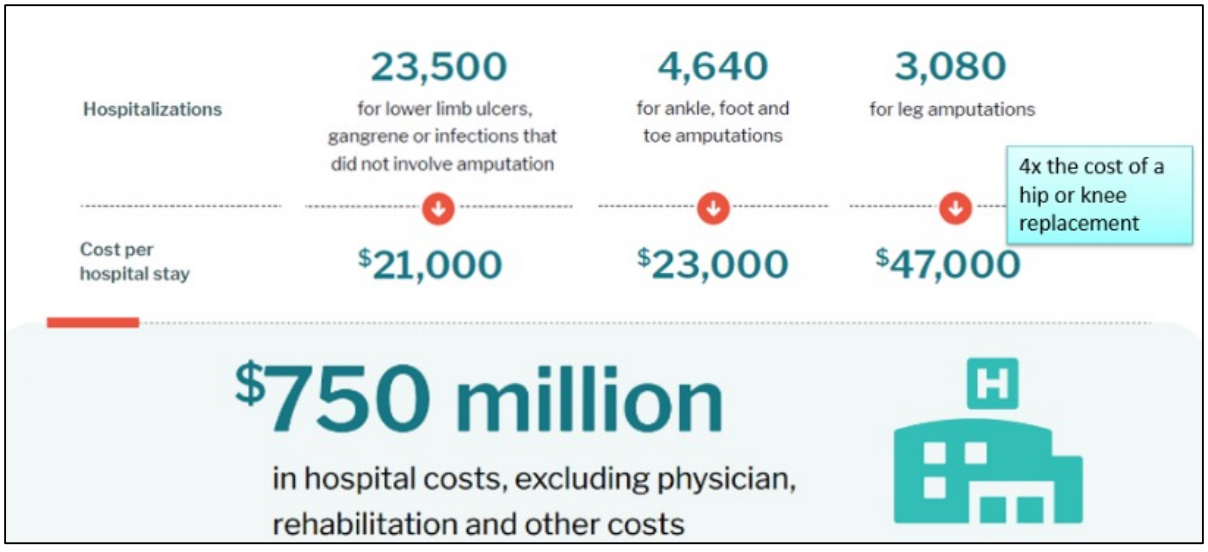
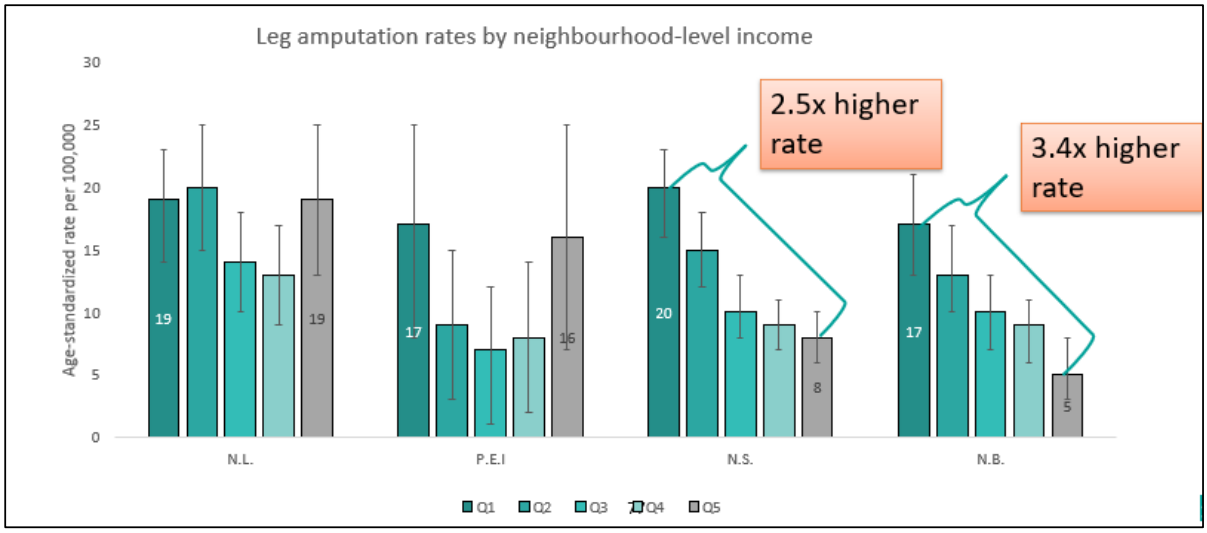


Figure 6 highlights a clear pattern of inequality in leg amputation rates by neighborhood-level income in NS and NB, although this pattern is less clear due in part to smaller data sets in NL and P.E.I. (CIHI, 2024).

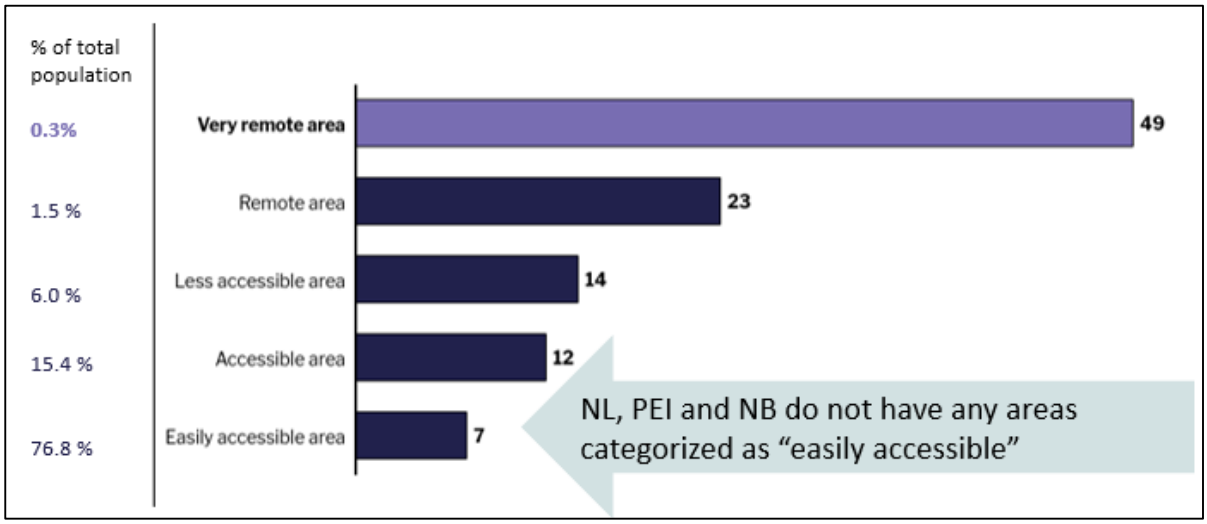
Education level and social deprivation were also explored in relation to leg amputations. The analysis found that for individuals living in neighborhoods with the lowest high school completion, diabetes-associated leg amputation rates were 4x higher (CIHI, 2024). Leg amputation rates were also 3x higher for individuals living in neighborhoods with the highest social deprivation in their respective provinces (CIHI, 2024).

Figure 6. Diabetes-associated leg amputation rates by neighborhood-level income in the Atlantic Canada provinces (CIHI, 2024)



When comparing diabetes-associated leg amputation rates by remoteness, there was a 7x higher rate of leg amputations in very remote areas in Canada compared with easily accessible areas (Figure 7). In the Atlantic provinces, there were smaller differences in leg amputation rates by geography (i.e., degree of remoteness). However, a higher proportion of the overall population lives in less accessible and remote areas, where access to foot care and other prevention services is challenging. NL, PEI and NB had no areas classified as easily accessible (i.e. large urban centres). Remoteness index categories were assigned based on the patient's residential postal code and Statistics Canada's 2021 Index of Remoteness, which considers travel cost and population size (Statistics Canada, 2024).

Figure 7: Age-standardized rates of diabetes associated leg amputations per 100,000 people by remoteness index category, 2020-2021 to 2022-2023



After sharing the report's findings, **Pichora concluded that support for preventing amputation begins with T2D prevention. Improving access to healthy and affordable foods and smoking cessation support were mentioned as upstream health promotion strategies that must be further promoted by public health systems and government (CIHI, 2024). Additionally, barriers that must be addressed due to their potential contribution to higher rates of lower limb amputation caused by diabetes, include:**

- **Access to primary care**
- **Managing diabetes**
  - **Out-of-pocket costs (Diabetes Canada, 2023a)**
  - **Lack of social support/isolation**
- **Access to specialized care**
  - **Travel costs and time**
  - **Limited coverage for services and devices (Diabetes Canada, 2024; CIHI, 2024).**

To advance equitable prevention and treatment of diabetes-associated lower limb amputations, **Pichora believes more needs to be done to fill data gaps. Currently race-based and Indigenous identity data is not routinely collected across Canada. This has resulted in a gap in our understanding of lower limb amputations experienced by First Nations, Inuit, and Métis populations as well as racialized populations. Further, access to effective health care needs to be better understood through improved indicators. Combining these data indicators with diabetes incidence and prevalence rates will help us understand how to better reduce lower-limb amputations in marginalized populations.** To read the full CIHI report and download the data tables, visit www.cihi.ca/en/equity-in-diabetes-care-a-focus-on-lower-limb-amputation/inequalities-in-diabetes-associated-lower-limb-amputations.

4.5 Julia Bannister – Is Just in time enough? Medic Alert initiative for NB homeless people with Diabetes

Julia Bannister presented on a pilot project in New Brunswick (NB) that aimed to support people experiencing homelessness who are also living with diabetes. Bannister practices social work in New Brunswick and Ontario. She has experience across the Provincial, Federal and non-profit sectors, and has been a Certified Diabetes Educator since 2013. Throughout the pilot project, Bannister focused on expanding diabetes care support systems for individuals experiencing homelessness by collaborating directly with homeless shelters and shelter users and community organizations and supporters. The project aimed to improve the quality of life and care for shelter users living with diabetes through the distribution of medical alert bracelets, and the preparation of resources on how to better identify and support shelter users living with diabetes. The pilot program, initially intended solely for the Fredericton area, ran from November 2018 until May 2020, and quickly expanded to support shelters throughout all of NB. During the implementation, 3 individuals with diabetes applied for and were provided with Medic Alert IDs. Additionally, one shelter requested additional staff education to support shelter users living with diabetes and an educational video on diabetes care was created and shared. With the onset of the COVID-19 pandemic, and alterations of public health priorities, human resource and organizational capacities shifted and the project came to an early end. Nevertheless, the impact was still significant on the lives of individuals who accessed a medical alert bracelet directly and may benefit future shelter users who are accessing a shelter that has been supplied with diabetes education, tools, and resources. **Bannister emphasized that grassroot initiatives such as the medic alert initiative need infrastructure to preserve sustainability and avoid going defunct. Likewise, more recognition needs to be placed on the energy and commitment required from each stakeholder involved in bringing a health initiative to fruition.**

The impact of homelessness in relation to diabetes care is an extremely important discussion topic, especially during the current affordability and housing crisis in Canada. At the Diabetes Canada Western Health Equity Summit (March 2024), research students and members of the Calgary Diabetes Advocacy Committee (CDAC), Saania Tariq and Tucker Reed, also spoke to the impact of diabetes on people experiencing homelessness. CDAC, led by Principal Investigator and Endocrinologist Dr. David Campbell, is another example of a community initiative to support people living with diabetes who are also homeless, with their film Low, highlighting and addressing the stigma associated with homelessness and diabetes (CDAC, n.d.). Both the medic alert initiative and the film Low highlight the importance of targeted community-level initiatives for marginalized individuals living with diabetes.

4.6 Heather Power – The Impact of Provincial CGM Coverage in a Pediatric Diabetes Clinic

In October 2023, the Government of Newfoundland and Labrador introduced a one-year pilot project to provide continuous glucose monitors (CGM) for T1D pediatric patients through the Pediatric Diabetes Program at Janeway Hospital. The initiative attempts to address a two-tiered system that Heather Power had observed in her clinics: patients with medical insurance or who come from a high socioeconomic background are afforded better health outcomes and an improved quality of life through access to CGMs. Meanwhile, patients without access to CGMs suffer from adverse health outcomes, spend more time during appointments discussing the logistics of blood sugar checks, and overall deal with significant increased stress. The impact of CGM use by pediatric patients can also be seen through comparisons in A1C levels (Figure 8). Children with CGMs are considered to be on a Hybrid-Closed Loop (HCL) pump (also known as an Automated Insulin Delivery pump), where their insulin pump and CGM work together to monitor blood sugar levels and adjust the insulin being administered with reduced management required from the individual. HCL pumps can help reduce the heavy mental load associated with monitoring blood glucose levels and insulin dosage. Before the pilot project introduction, A1C levels for children with an HCL pump were considerably lower than children with only an insulin pump or reliant on injections. A1C levels amongst children who were now on a HCL pump also showed significant change with an overall reduction of 1.2% in A1C levels before and after the introduction of the HCL. For children who had an A1C higher than 9.4% before the introduction of the HCL, a reduction of 2.4% was observed.

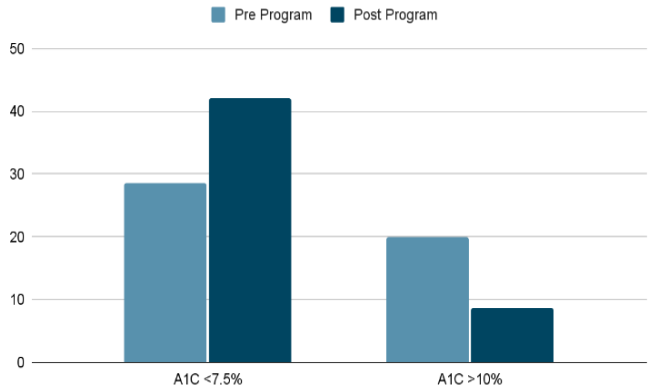
Figure 9 highlights the changes in A1C levels at the pediatric clinic pre-and post- implementation of the pilot project. The pilot project has provided 160 pediatric patients with CGMs, and 68 have begun using HCL pumps. Of the patients now on a HCL pump, an average overall 1.5% reduction in A1C levels was observed between pre- and post-universal CGM coverage. As well, for patients who pre-pilot had A1C levels higher than 10%, an average 2.1% reduction in A1C levels was observed.

While private insurance is still considered first payer, provincial coverage is available as a last resort payer to support 100% coverage through the pilot. **Power notes that the definition of an ideal patient for CGM coverage has changed – the higher the initial A1C, the greater the benefit of an HCL pump. Supporting access to HCL technology and removing the barriers to the technology will be critical in reducing adverse health outcomes among people living with diabetes and will overall reduce the financial strain of diabetes care on both patients, families, and the healthcare system.**

Figure 8: A1C levels for T1D pediatric patients in the Pediatric Diabetes Clinic at Janeway Hospital before public CGM coverage (2020-2021)

	Injections	Pumps	Hybrid Closed Loop (HCL) Pump
Number	27	161	53
A1C <7.5%	3%	16%	82%
Avg A1C	9.4%	8.6%	7.06%

Figure 9: A1C levels for T1D pediatric patients in the Pediatric Diabetes Clinic at Janeway Hospital before and after public CGM coverage



4.7 Damilola Iduye – Type 2 Diabetes in African Canadian Communities: Are We Asking the Right Questions?

As the prevalence of diabetes in Canada continues to increase, Damilola Iduye spoke about the need to investigate the factors contributing to the unequal burden of diabetes in Black Canadian populations. In 2022, the age-standardized prevalence rate of diabetes for Black people in Canada was 13.3%, the second highest amongst racialized populations in the country (Diabetes Canada, 2023b). Findings from another study on racial health inequities by Veenstra and Patterson (2015) found that Black women and men were found more likely to have diabetes than White women and men, respectively.

Social determinants of health (SDOH) play a critical role in the development and management of diabetes, especially type 2 diabetes, which is the most common, affecting approximately 90% of all diabetes cases (International Diabetes Federation, 2024). Studies examining the linkage between the SDOH and diabetes have reported that low socioeconomic status, food insecurity, housing, and access to health care, among other factors, contribute to diabetes inequities and poor health outcomes (Clark & Utz, 2014; Hill-Briggs et al., 2021). Black Canadians are disproportionally impacted by low socioeconomic status, unemployment, housing security, food insecurity, social exclusion due to racism, and more. However, little research has been conducted to examine how exactly the SDOH intersect to shape the unique experiences of Black Canadians with type 2 diabetes. **Iduye also spoke about how being Black is often presented as a risk factor for diabetes. She notes that this language is particularly harmful in purporting diabetes as a racial disease rather than emphasizing the ways in which social factors and deeply ingrained structural racism play a role in predisposing Black Canadians to develop type 2 diabetes.**

To better understand the evidence gap in diabetes research on Black Canadian populations, Iduye is conducting a scoping review on the topic. Preliminary findings of the review show that limited studies are solely focused on Black Canadian populations. Most of the studies are focused on immigrant populations with Black people included in the subgroup analyses. One of the studies (Swaleh & Yu, 2021) included in the scoping review highlights the need to address income support, access to healthcare, and increasing diversity within the health sector as the next steps to reducing the disproportionate prevalence of diabetes in Black communities. **Iduye emphasized that addressing the SDOH affecting Black Canadian populations needs to be done through an intersectional framework that avoids treating Black Canadians as a monolith community and instead considers the overlapping social, political, historical, and economic contexts that impact each individual in unique ways.** Iduye will continue exploring this area of research in her doctoral work on the socio-structural determinants of health shaping the experiences of Black Canadians with type 2 diabetes.

5.0 Breakout Discussions

Using an appreciative inquiry approach to dialogue that emphasizes strengths-based inquiry and planning (Armstrong et al., 2020), summit attendees formed groups to discuss and collaborate on action-planning for key inequity issues impacting Canadians across their provinces. Summit attendees were split into breakout groups and assigned one of the following topics to explore through appreciative inquiry:

- Rural Access for Diabetes Care
- Affordability of Diabetes Care
- Food Insecurity in Relation to Diabetes Care
- Ethnoculturally Competent Diabetes Care
- Diabetes Care for Black People living in Canada
- Diabetes Care for Canadians Without Access/Limited Access to Diabetes Care Supports

For each topic, discussion groups were asked to consider the following questions independently then as a group (Armstrong et al., 2020):

1. *Define: What is the current state of the health inequity topic in relation to diabetes?*
2. *Discover: What initiatives, policies, programs, or interventions, are you aware of that currently support equitable diabetes care for this topic?*
3. *Dream: What should equitable diabetes care for this topic look like in your province?*
4. *Design: What policies, initiatives, programs, or interventions are needed to create this vision?*
5. *Deliver: How can we deliver on this vision? Questions to consider include: Who will or needs to champion this work? What steps can we take in our own roles to achieve this?*

Summarized responses for each topic are provided below, focusing on the Define, Dream, and Deliver responses from group discussions.

Diabetes Care for Individuals without Access/Limited Access to Primary Care

Define (i.e., what is the current state?)

- Few initiatives exist to support care, often through accessing unaffiliated clinics
- Long waitlists for primary care
- Lack of primary care strains specialists within the system
- Virtual options require online services + access to cell service or internet

Dream (i.e., what should it look like?)

- Canadians should have assistance in navigating the healthcare system
- Clinics should be set up to serve marginalized communities (ex. newcomers, homeless population)
- Specialists should be accessible through clinics and not require referrals
- Diabetes patient navigators should be available to help people access programs available
- Expansion of social work and mental health services within diabetes programs is required

Design (i.e., what interventions are needed to achieve our vision?)

- Provinces require universal Electronic Medical Records to support navigation and access
- Mobile outreach clinics are needed to reach populations who have difficulty accessing or travelling to clinics
- Expanded virtual care options can improve access to care

Deliver (i.e. how can we deliver on this vision?)

- Improve working conditions for those working in healthcare system
- Patient engagement is needed to deliver on this vision
- Provinces require better ways to measure impact in healthcare settings
- Bottom to top – all stakeholders need to involved in discussions on implementation of interventions
- Capacity needs to be improved and better working conditions to support retention

Ethnoculturally Competent Diabetes Care

Define
(i.e., what is the current state?)

- There is not enough education support at the clinic level to ensure services are appropriate for diverse ethnocultural communities and groups
- Adaption of care services to different cultures rather than applying one form of culturally competent care is missing
- There are no set programs that are specific to different ethnocultural community needs

Dream
(i.e., what should it look like?)

- Everyone should have access to safe, culturally appropriate, person-centered care
- There should be easily accessible translation services and materials available in all healthcare settings
- Diabetes care navigators that have knowledge and competency in culturally appropriate care should be available to provide support for individuals navigating the healthcare system

Design
(i.e., what interventions are needed to achieve our vision?)

- Dedicated resources and funding available to support ethnoculturally competent care
- Require mandatory annual training for all staff and providers to ensure there is increased awareness of systemic racism, personal biases, what culturally appropriate care looks like, and understand the needs of diverse populations within the community
- Increase collection of race and ethnicity data, with resources on how to appropriately collect that data

Deliver
(i.e., how can we deliver on this vision?)

- An Atlantic Diabetes Collaborative between the Atlantic provinces, to share resources and initiatives and reduce duplication efforts

Affordability of Diabetes Care

Define
(i.e., what is the current state?)

- Diabetes care is often inequitable as it usually relies on income and/or insurance, and is extremely paperwork heavy
- Resources are poorly communicated, supports are delayed, and ageism exists in the support system for accessing affordable care

Dream
(i.e., what should it look like?)

- Diabetes care programs (ex. CGM coverage) should not be restricted by age
- Systems in place to support people who need to navigate co-payments and reimbursements for their diabetes care supports should be required
- A greater focus on prevention for Type 2 Diabetes, including access to education, food security, CGM coverage, and mental health supports is needed

Design
(i.e., what interventions are needed to achieve our vision?)

- A provincial framework to address affordability of diabetes care must be created
- Expand age restrictions for Type 1 Diabetes care, to support young adults during the transition period from pediatric to adult care
- Increased human resources to support programs, streamline paperwork, and support admin processes
- Centralization of diabetes care programs

Deliver
(i.e. how can we deliver on this vision?)

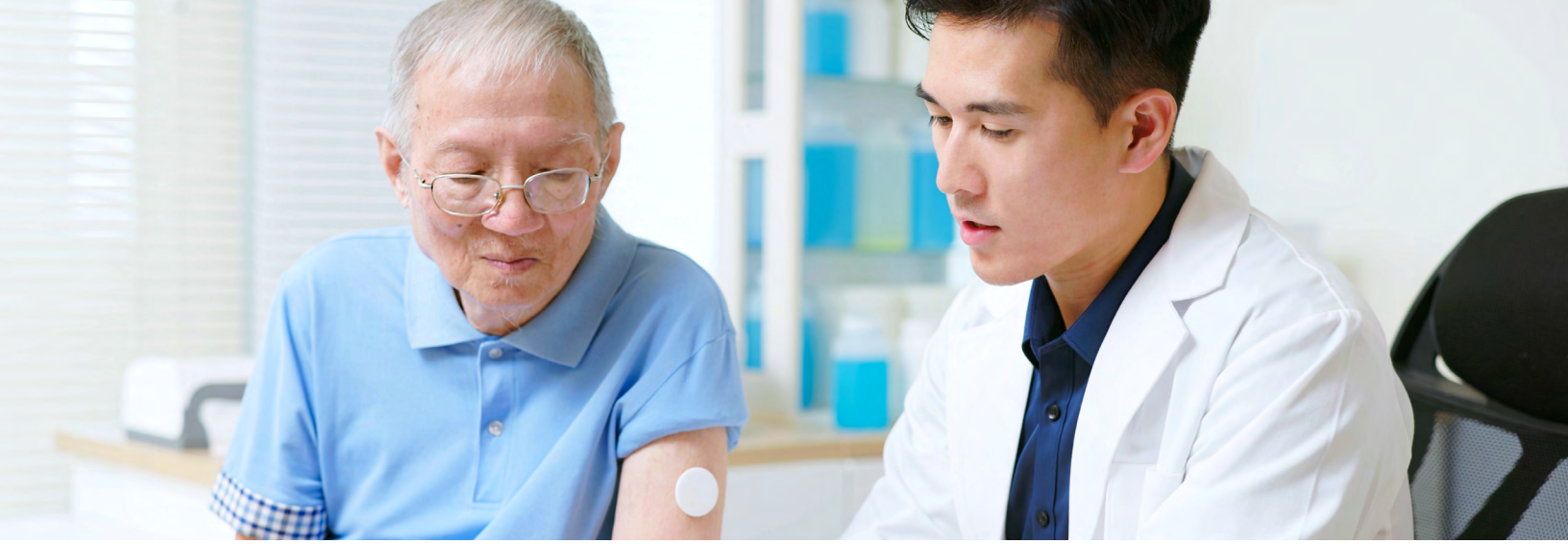
- Government, people living with diabetes, advocates, groups like Diabetes Canada, Healthcare professionals, and community members all need to be involved in developing actions to support affordability
- Consider allowing front line healthcare workers to lead more of this work and collaborate with all sectors
- We must be better at working across levels of government, better dialogue, and less silos

Diabetes Care for Black People living in Canada

Define (i.e., what is the current state?)	• Current diabetes care for Black People living in Canada is very generalized, not culturally specific, and often not available • Lack of access to primary care is a significant issue • Lack of education on what diabetes looks like in Black populations (i.e. symptoms that may be more common, differences in BMI and waist circumference measures)
Dream (i.e., what should it look like?)	• Having affordable diabetes care • Meets communities where they are geographically • Prevention-based care that starts early but is also be focused on throughout patient's life • Structurally and socially responsive care • Diverse leadership and workforce in diabetes care spaces
Design (i.e., what interventions are needed to achieve our vision?)	• Diabetes care resources must exist within the community • Policies must be responsive and cater to the needs of the people they are serving
Deliver (i.e. how can we deliver on this vision?)	• Collective championing of this work on all levels is vital, including government, community partners, policy makers, and healthcare professionals • Priority must be placed on providing awareness to stakeholders in a manner that is empowering, non-shaming, and historically conscious

Food Insecurity in Relation to Diabetes Care

Define (i.e., what is the current state?)	• Food insecurity for people living with diabetes has a high impact on quality of life • A lot of shame and stigma associated with those facing food insecurity and living with diabetes • Lack of access to safe and nutritious foods • Not all food security programs are able to support people living with diabetes
Dream (i.e., what should it look like?)	• Standardized and non-stigmatizing screening in place for food insecurity to better recognize who is struggling during diabetes care appointments • Support systems in place to help individuals navigate food insecurity and access any necessary resources
Design (i.e., what interventions are needed to achieve our vision?)	• Explore policies such as basic universal income to ensure access to healthy, affordable, and culturally-relevant foods • Interventions that collaborate with community partners and social workers to support navigation of food security programs are necessary • Implement policies and/or programs that increase funding for food security (i.e., increased funding for food banks, community fridges, grocery reimbursements)
Deliver (i.e., how can we deliver on this vision?)	• Government and policy makers must be engaged • Inclusivity must be imbedded into food security programs and must consider the social determinants of health • Protected wages and universal basic income can reduce stress of food security and support appointment attendance for diabetes care (as many people miss out on appointments because they need to work to afford necessities like groceries)



Rural Access for Diabetes Care

Define

(i.e., what is the current state?)

- Healthcare provider turnover and increases in temporary care providers are reducing the continuity of care and leading to greater adverse health outcomes
- Poor access is a prominent and growing issue in rural and remote areas
- Increases in virtual care availability although it is relatively new and can still be difficult to use and access for some populations

Dream

(i.e., what should it look like?)

- Due to the lack of primary care access, pharmacists and nurse practitioners must be more heavily leveraged to provide team-based diabetes care
- Require more diabetes care services that can meet people on their own terms, such as providing care outside of typical business/working hours
- Greater support for self-management through collaboration with care team and patients

Design

(i.e., what interventions are needed to achieve our vision?)

- Implement tools and guidelines that can monitor for diabetes symptoms (ex. routine footcare to monitor foot health) to support continuity of care
- Leverage what's available (i.e. incorporate different healthcare providers in primary care team)
- Provide access to technology so that people can access virtual care
- Provide different models of care delivery that meet the needs of the community (ex. fly in providers, travelling clinics)

Deliver

(i.e. how can we deliver on this vision?)

- Engagement with health authorities, government, and impacted rural and remote communities is required to support equitable diabetes care
- Comprehensive team-based care will be required and will need to leverage and enhance what's available, so healthcare providers will also need to be engaged
- Technology and AI must to be leveraged to support healthcare for all

In the second breakout group discussions, summit participants were asked to form groups with other attendees from their province to discuss upstream, midstream, and downstream interventions for diabetes care in their province (NCCDH, 2014). Groups were asked to consider the following questions:

Q1: Of the three levels of public health interventions (upstream, midstream, and downstream), where do you feel your province has been most successful in addressing diabetes? Please provide specific examples if possible

Q2: Of the three levels of public health interventions (upstream, midstream, downstream), where do you think your province needs to focus more, to support equitable diabetes care? What would/could interventions look like at that level?

The following table summarizes key points shared from each province in response to the above questions:

Province	Question 1 Responses	Question 2 Responses
New Brunswick	Provincial focus has been in downstream actions with programs such as: • MyHealthNB which allows people to access their own health information through the province, promoting self-management and self-referral, and the ability to connect with diabetes educators and professionals to receive diabetes care and supports • Pharmacy-based programs where chronic disease care can be provided • Diabetes case management program is embedded in the primary care space for those that have a primary care provider • Virtual care has alleviated some of the inequitable access to primary care	More emphasis needs to be placed on: • Removing regional barriers to diabetes care services • Transitional services for young adults moving from pediatric care to adult care, and adults moving into long-term care At the upstream level, there needs to be a greater focus on: • Meeting basic needs such as food, housing, medication coverage, and device coverage • Improve and increase accessibility to affordable food options
Newfoundland and Labrador	Successful provincial interventions have been at the downstream level, including: • CGM and Pump accessibility programs • Diabetes guideline-based tools • Access to personal health records • EndHomelessness NL has taken progressive steps to care for the homeless population in the province, including providing healthcare service, which can support people living with diabetes who are also experiencing homelessness	• More emphasis needs to be placed on midstream and upstream actions • Difficult to address gaps in diabetes care when communities are still not having basic needs met (i.e. no clean water, expensive groceries where it is cheaper to buy pop than to access clean drinking water) • Issues with internet infrastructure impacting ability to access virtual care • Food needs to be subsidized to support access to affordable and healthy food options • Issues in urban planning need to be addressed to support subsidized housing and low-income rentals so that basic needs can be met, and more focus can be placed on addressing, treating, and managing chronic diseases like diabetes

Province	Question 1 Responses	Question 2 Responses
Nova Scotia	Initiatives and interventions that have been the most successful, including: • Diabetes centers and affiliated programs • Glucose sensor and insulin access programs • Brotherhood and Sisterhood programs for Black Nova Scotians • Registry that has allowed Nova Scotians to self-identify if they have diabetes, with follow-up assessments revealing that many have not accessed care in the past year • Navigators for diabetes and chronic disease patients	More emphasis needs to be placed on a range of interventions, including: • Finding better ways to identify, assess and refer patients from equity-deserving populations • Creating systems and structures that provide more power to patients in the level and type of care they receive • Improving and implementing income support programs • Supporting community-care teams that leverage pharmacies and diabetes care centers so that services aren't being duplicated • Implementing prevention programs such as foot care services to prevent lower-limb amputations
Prince Edward Island	Focus has been primarily on downstream interventions, including: • Access to provincial diabetes programs that require a diabetes diagnosis • CGM programs and support for test strip access if on insulin	More emphasis needs to be placed on upstream and midstream interventions, including: • Supporting low-socioeconomic groups with barriers to attending appointments due to work schedules + needing to work every shift they can • Creating user-friendly access to diabetes care programs, especially for virtual care • Improving staff retention • Changing income thresholds for copays to support medication and device access • Increasing actions for T2D prevention

6.0 Next Steps and Recommendations

Diverse actionable next steps to support equitable diabetes care for individuals living in Atlantic Canada were explored through presentations and group discussions. Discussions from the 'Delivery' portion of the first group breakout room have been summarized to create the following recommendations:

1. **Healthcare planning and delivery decisions will require the engagement of all stakeholders involved in diabetes care**, including government, policy makers, healthcare professionals, health authorities, impacted communities, and individuals living with diabetes. Decisions around diabetes care cannot be made in silos and must engage stakeholders from design to implementation, to support equitable diabetes care.

2. **Existing healthcare teams and structures must be better leveraged to support access and level of care provided**, from expanding diabetes care services provided by nurses and pharmacists, to increasing use of AI and technology in providing virtual care. As more and more Canadians struggle to access primary care and other healthcare services, it will be especially important to support healthcare initiatives that provide more power to patients in accessing and navigating diverse care options.

3. **The impact of the social determinants of health on diabetes care must be addressed through upstream and midstream interventions, to support equitable diabetes care.** Policies that address food insecurity, rural access, housing stability, and the affordability crisis, also support equitable diabetes care. Reducing the impact of the SDOH on people living with or impacted by diabetes is critical to supporting positive health outcomes for Canadians.

4. **An Atlantic Canada Collaborative will be critical to continuing key conversations around equitable diabetes care and furthering actionable next steps.** The Diabetes Canada Atlantic Health Equity Summit has created a space for stakeholders to connect and share knowledge about the current state of diabetes care, but continuous collaboration and discussions will be necessary to achieving equitable diabetes care for all people living in Atlantic Canada.

As well, key recommendations to support equitable diabetes care in Atlantic Canada, from the summit presentations, are **highlighted** throughout the paper and compiled below:

1. In relation to health equity frameworks, Rebekah Quach highlights that **system partnerships are crucial to the success of framework implementation, as a multi-sectoral approach for health equity can:**

    - **Enhance and increase capacity**
    - **Strengthen accountabilities**
    - **Secure commitment from leaders**
    - **Generate evidence to support analysis and decision-making**
    - **Create opportunities and accountabilities for community engagement**
    - **Support innovation and input.**

2. In relation to food insecurity and diabetes management, families interviewed by Beth Cummings and her research team agreed that **the screening process around identifying food insecurity in a clinic setting must be accessible and consistent, so that families can feel comfortable asking for help, and clinics can provide the appropriate supports required. Caregivers and families welcomed the development of a toolkit to include financial programs, recipes and meal plans, cooking workshops, supply samples, support groups and access to local programs.**

3. In relation to equitable care for diabetes-associated lower limb amputations, **Erin Pichora emphasized that support for preventing amputation begins with T2D prevention. Improving access to healthy and affordable foods and smoking cessation support were highlighted as upstream health promotion strategies that require further promotion and support from public health systems and government (CIHI, 2024). Additionally, barriers that must be addressed due to their potential contribution to higher rates of lower limb amputation caused by diabetes, include:**

    - **Access to primary care**
    - **Managing diabetes**
        - **Out-of-pocket costs (Diabetes Canada, 2023)**
        - **Lack of social support/isolation**
    - **Access to specialized care**
        - **Travel costs and time**
        - **Limited coverage for services and devices (Diabetes Canada, 2024; CIHI, 2024).**

4. To advance equitable prevention and treatment of diabetes-associated lower limb amputations, **Erin Pichora stressed that more needs to be done to fill data gaps. Currently race-based and Indigenous identity data is not routinely collected across Canada. This has resulted in a gap in our understanding of lower limb amputations experienced by First Nations, Inuit, and Métis populations as well as racialized populations. Further, access to effective health care needs to be better understood through improved indicators. Combining these data indicators with diabetes incidence and prevalence rates will help us understand how to better reduce lower-limb amputations in marginalized populations.**

5. In relation to grassroot initiatives such as the medic alert initiative, Julia Bannister emphasized that **infrastructure is required to preserve sustainability of pilot projects and avoid going defunct. Likewise, more recognition needs to be placed on the energy and commitment required from each stakeholder involved in bringing a health initiative to fruition.**

6. In relation to CGM coverage, Heather Power notes that the definition of an ideal patient for CGM coverage has changed – the higher the initial A1C, the greater the benefit of an HCL pump. As such, **supporting access to HCL technology and removing the barriers to the technology will be critical in reducing adverse health outcomes among people living with diabetes and the financial strain of diabetes care on both patients, families, and the healthcare system.**

7. In relation to diabetes care for Black people living in Canada, Damilola Iduye **emphasized that addressing the SDOH affecting Black Canadian populations needs to be done through an intersectional framework that avoids treating Black Canadians as a monolith community and instead considers the overlapping social, political, historical, and economic contexts that impact each individual in unique ways. Likewise, Iduye noted that diabetes diagnosis guidelines that present being Black as a risk factor is particularly harmful in purporting diabetes as a racial disease and should be avoided. Instead, more emphasis and research should be placed on understanding how social factors and deeply ingrained structural racism play a role in predisposing Black Canadians to develop type 2 diabetes.**

7.0 Conclusion

The Diabetes Canada Atlantic Health Equity Summit is the second health equity summit held by the SMIDF team, following the Western Canada Summit in March 2024, and was a vital opportunity for individuals in the diabetes care and health equity space to connect, learn, share, and discuss next steps towards achieving equitable diabetes care. As Diabetes Canada and the SMIDF team prepare for future roundtables and discussions around equitable diabetes care, key discussions and feedback from the Atlantic Summit will guide project planning and implementation moving forward. A common theme of discussion from the Atlantic Summit was the excitement and desire to discuss action and collaboration across all Atlantic provinces. Participants shared repeatedly that action for equitable diabetes care must involve community partners, healthcare professionals, patients, and provincial governments. The SMIDF team hopes to continue to support efforts for equitable diabetes care across Canada, and advance discussions around actionable steps to preventing and removing the barriers to equitable diabetes care.

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