

Comprehensive Virtual Care for Persons with Diabetes: Challenges and Opportunities for Ontario

Diabetes Action Canada Round Table Report

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Acknowledgements and Contributors

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Introduction

The COVID-19 pandemic has necessitated a rapid, increased reliance on virtual care within Ontario's health care system, especially for complex chronic disease management. This shift to virtual care has highlighted many pressing challenges that should be addressed to appropriately provide virtual care for Ontario's patients. This shift has also revealed opportunities for a virtual care approach to address the complexities and inequities that exist in Ontario's current health care system surrounding the provision of care for individuals with chronic diseases such as diabetes.

To explore these key challenges and opportunities, **Diabetes Action Canada (DAC)** partnered with The **Ontario SPOR (Strategy for Patient Oriented Research) SUPPORT (Support for People and Patient-Oriented Research and Trials) Unit (OSSU)** to engage a diverse range of stakeholders involved in diabetes and chronic care in Ontario's healthcare system. The aim of the Round Table was to advance patient-centered complex disease management in Ontario by identifying priorities for the development of a comprehensive, integrated virtual health care system for people with diabetes.

Objectives

Specifically, the objectives of the Virtual Care Round Table were to identify:

- 1) Prominent challenges with and potential benefits of the use of virtual care for patients with chronic conditions;
- 2) Successful approaches to designing and implementing virtual care models in Ontario's health system; and
- 3) Strategies to meaningfully engage stakeholder groups, including patients, families, and caregivers in co-designing virtual care models.

DAC Virtual Care Round Table

The DAC Virtual Care Round Table occurred on September 29th, 2020 from 1:30-3:00 pm via Zoom web conference. Four speakers were invited to give presentations on considerations related to virtual care for chronic disease, and specifically diabetes, management (see Table 1 for a summary of these presentations).

The DAC Virtual Round Table meeting was facilitated by Eddy Nason, the Assistant Director of OSSU. At the onset of the meeting, each speaker presented on virtual care considerations and opportunities (presentations ranged from 5-20 min in length). Following the presentations, the facilitator led a large-group virtual discussion centered around the three objectives of the Round Table (see Appendix A for the DAC Virtual Care Round Table agenda). Attendees were encouraged to engage in a discussion with the presenters and other attendees by submitting their questions and comments in the Q&A function of the Zoom web conference platform. Prior to the meeting, all attendees received a short summary of each presentation (see Appendix B for these summaries).

Table 1. Overview of presentations at the Virtual Care Round Table

Presentation Title	Presenter	Summary
Success Factors for Complex Chronic Disease Management - Diabetes as an Exemplar	Ms. Lori Sutton <i>Regional Facilitator, Toronto Diabetes Care Connect, South Riverdale Community Health Centre</i>	This presentation focused on integrated care programs for people with diabetes and other chronic conditions. In particular, the presenter highlighted critical lessons learned from engaging with patient groups who require coordinated care from multiple practitioners. The presenter outlined how these lessons that could be applied to inform the implementation of virtual care models.
Diabetes Specialist Engagement in Delivering Virtual Care during COVID	Dr. Gary Lewis <i>Principal Investigator of Diabetes Action Canada – CIHR SPOR Network in Diabetes and Its Related Complications; Director, Banting and Best Diabetes Centre, University of Toronto</i>	Dr. Lewis presented his experience with caring for people with diabetes in both traditional and virtual settings. Additionally, the presenter discussed critical challenges and opportunities experienced with virtual care models during COVID-19.
The STOP Program as a Model for Integrated Virtual Care for Complex Chronic Disease	Dr. Peter Selby <i>Senior Medical Consultant and Clinician Scientist, Centre for Addictions and Mental Health; Director, Smoking Treatment for Ontario Patients (STOP) Program</i>	This presentation focused on the Smoking Treatment for Ontario Patients (STOP) Program, an integrated virtual care model for complex chronic disease care. The presenter highlighted the core barriers and facilitators that the team experienced while implementing the STOP program, and discussed how the model could be adapted to support a patient-centered approach to using virtual care to support individuals with chronic conditions.
Reflections on Creating a Value-Based Solution for Diabetes and Complex Chronic Disease Management	Dr. Catharine Whiteside <i>Executive Director, Diabetes Action Canada</i>	This presentation focused on the SPOR Network in Diabetes and its Related Complications' priorities in relation to their capacity to design, implement, evaluate, and scale and spread virtual care models in Ontario.
Thoughts from A Patient Perspective – Virtual Care in Diabetes	Ms. Lorraine Bayliss <i>OSSU Patient Partners Working Group</i>	Ms. Bayliss presented her personal experience as a patient who received virtual care for diabetes throughout the COVID-19 pandemic. The presenter shared her perspectives on the challenges and opportunities presented by virtual care for people with diabetes.



Knowledge User Engagement

Selected key stakeholders from OSSU and SPOR Evidence Alliance (SPOR-EA) teams, diabetes non-governmental organizations (NGOs) and other health-related industries, as well as health system leaders, patient partners, health care providers, digital health experts, patient-oriented researchers and health data scientists attended the September 29th DAC Virtual Care Round Table. See Table 2 for a summary of the organizations represented at the event.

Table 2. Overview of stakeholders at the Virtual Care Round Table

Stakeholder Groups	Representative Organizations
Patient Partners	OSSU Patient Partner Network
Non-Governmental Organizations	Diabetes Canada JDRF Fighting Blindness Canada Diabetes Canada Diabetes Action Canada Responsible Gambling Council
Healthcare Networks	Alliance for Healthier Communities SCOPE (Seamless Care Optimizing the Patient Experience)
Hospitals	St. Michael's Hospital The Ottawa Hospital The Centre for Addiction and Mental Health North York General Hospital
Health Centres	South Riverdale Community Health Centre
Relevant Committees	Toronto Regional Diabetes Steering Committee
Data Science Groups	Centre for Advanced Computing Bitnobi Indoc Research Ontario's Institute for Clinical Evaluative Sciences Vector Institute for Artificial Intelligence North York General Hospital – Artificial Intelligence University of Waterloo – Artificial Intelligence The Fields Institute for Research in Mathematical Sciences
Universities	Queen's University McMaster University University of Toronto
Research Networks	Canadian Longitudinal Study on Aging Institute for Better Health – Trillium Health Partners BC Primary Health Care Research Network

The Future of Virtual Care in Ontario: Key Challenges and Opportunities

Through the presentations and facilitated discussion period, presenters and attendees at the Virtual Care Round Table identified critical challenges with and potential benefits of virtual care models in Ontario. Additionally, attendees suggested factors that should be considered when integrating virtual care as a core component of diabetes management both during and beyond the COVID-19 pandemic. These common challenges, potential benefits, and suggestions are outlined below.

Addressing Health Inequities with a Virtual Care Model

Round Table presenters and attendees spoke to the persisting health inequities that are reinforced by both the traditional health care system overall, as well as the current approach to virtual care. They then highlighted the opportunity for virtual care systems to address these inequities and shared strategies to design and leverage virtual care systems with this objective in mind. These considerations included:

- 1. Access to care.** Speakers highlighted that traditional diabetes care often has many barriers to access, particularly for individuals who are more socially vulnerable. These barriers are also present in virtual environments; access to care can be limited if patients lack access to the technology, tools and/or technological literacy needed to engage in the virtual environment. Presenters and attendees shared that addressing this barrier with creative solutions will be important for creating an equitable virtual care system. These solutions included, but were not limited to, **1)** providing multiple avenues for accessing virtual care (e.g., offering an app-based program where internet connection is not needed), **2)** having a 'navigator' available to link patients to accessible services (see point 2), and/or **3)** conducting device drives to make technology available to patients who need it.
- 2. Social determinants of health.** Presenters and attendees stressed the critical impact of social determinants on health outcomes in patients with chronic conditions. One presenter highlighted that social factors can drive as much as 80-90% of health outcomes for people with complex chronic conditions such as diabetes. Participants reported that physicians are currently not well equipped to use social prescription tools to address these determinants for their patients. However, virtual care approaches, if executed in an equitable and accessible manner, can potentially address these challenges. Widespread virtual care has allowed for a better connection between the patient and provider, creating a unique opportunity to integrate the use of validated tools for social prescription into these care model to better address the social factors driving health outcomes for patients and to track relevant outcomes. A presenter suggested that a clinical 'navigator' (a role used in other successful care models such as STOP) could be integrated into the virtual care model to link patients to appropriate services.
- 3. Tailored care within a virtual care approach.** Several speakers highlighted the importance of designing a virtual care system that is adaptable to the needs of individual patients. Speakers highlighted that this flexibility would allow the system to use less time and resources caring for those who are able to self-manage their diabetes effectively and instead re-direct those resources to those who may need

additional supports for care. One speaker highlighted that remote monitoring systems in Newfoundland and the United Kingdom (UK) could provide useful models for designing this kind of tailored approach (e.g., the UK's home visit option for those not responding to primary care).

Engaging Patients to Design Effective Virtual Care Models

Round Table participants stressed patients must be engaged as partners in order to ensure virtual care models are appropriate, accessible, and equitable in their design and execution. Participants provided some suggestions for how to effectively achieve this suggested approach to co-creation:

- 1. Effectively engaging patients in co-design.** Speakers highlighted the importance of engaging patients in a capacity that empowers them to collaborate with policymakers and other stakeholders on the design of a virtual care model (rather than simply consulting or informing them throughout the development process). Speakers shared that this kind of engagement can assist in highlighting and therefore addressing system inequities contributing to barriers to access and can illuminate which factors of a virtual care model are most important to meet the needs of patients. Attendees spoke to the importance of ensuring that there is adequate funding available to support these collaborative approaches.

Using Data to Monitor and Evaluate Virtual Care Models

Several presenters addressed the importance of monitoring and evaluating virtual care models to ensure these models meet the needs of system stakeholders. Presenters and attendees shared a number of suggestions for collecting and leveraging this data effectively, including:

- 1. Engaging stakeholders to develop evaluation metrics.** Several speakers discussed the importance of engaging with stakeholders, especially patients, when choosing metrics to measure the impacts of models of care on patient and health system outcomes. Aligned with the principle of co-creation participants highlighted such engagement is necessary to ensure that the models are being evaluated using outcomes that are important to key stakeholders, including patients.
- 2. Leveraging existing groups to evaluate new models of care.** A presenter shared that programs and organizations in Ontario (e.g., STOP, Ontario Drug Policy Research Network) with comprehensive outcome assessment plans could be engaged to develop virtual care model metrics. Additionally, a presenter highlighted that the new Ontario Health Teams could be leveraged as a hub for collecting data on value-based healthcare performance indicators for virtual care.

Developing Effective Models of Virtual Care

Participants shared key approaches they believe are critical to integrate into effective models of virtual care:

- 1. Creating a patient pathway.** Round Table participants discussed the importance of establishing a clear care pathway for patients, and identified four core factors that should be considered when developing the pathway, including:

- **Identifying and targeting at-risk patients:** Consider who would most benefit from consistent access to virtual care (i.e., at-risk, socially vulnerable patients), and proactively identify and target these patients using virtual care models. Speakers highlighted that the goal of innovative virtual care models should be to optimize the management of the 5% of patients that are responsible for the majority of health system costs. Access to healthcare data was identified as a critical resource to successfully execute this identification process. Possible data sources included existing health data sets, electronic medical records, and/or screening during clinic visits.
 - **Enrolling and engaging patients:** Consider how patients will be enrolled and engaged in virtual care in a manner that effectively identifies and addresses patient needs.
 - **Co-designing treatment:** Consider 1) how patients can be engaged to co-create their treatment pathway through a virtual care model, and 2) how virtual care can provide relevant mentorship opportunities for practitioners (e.g., to build capacity in social prescribing).
 - **Monitoring patient progress:** Consider how patient outcomes will be assessed and monitored in a virtual care model.
- 2. Use of care managers.** One speaker discussed their success with a virtual care model that incorporated the role of ‘Care Manager’ to support patients in managing their care portfolio. These individuals focused on patient empowerment; they were responsible for establishing and facilitating a relationship with both the patient and the clinical team to ensure the patient receives appropriate and coordinated care. The care managers worked with patients to identify their goals and how to achieve them. Attendees spoke to the importance of this role and the need for funding to support this role.
- 3. Integrating supports for patient mental health.** A patient partner shared that they were not yet able to replicate their peer-to-peer diabetes support group in a meaningful manner through a virtual platform. This challenge demonstrated the importance of considering how critical supports for patient mental health (e.g., support groups) can be integrated into virtual platforms.

Leveraging Existing Capacity

Speakers addressed the importance of leveraging existing Ontario infrastructure when developing virtual care models to increase integration within the health system, as well as feasibility and impact. Suggestions included:

- 1. Standardizing use of virtual care strategies.** Presenters and attendees highlighted that many services are available for diabetes care in Ontario, including strong virtual care models; however, these services are not coordinated or standardized across the province. Identifying virtual care models already in place and leveraging them to develop a province wide network could be an effective approach to developing a standard provincial approach to virtual diabetes care.
- 2. Integrating virtual and traditional care.** Speakers discussed the importance of integrating virtual care into current models of care, rather than completely replacing in-person care. Speakers suggested that virtual care models could be used to streamline traditional in-person care by:

- Reducing the need for in-person visits, which could reduce transport time and costs for patients;
- Improving triage processes for patients prior to in-person visits; and
- Providing increased support and progress monitoring for patients outside of traditional in-person care.

Conclusion and Next Steps

Presenters and attendees suggested that conducting demonstration projects to improve the scale and spread of virtual care models could be an effective next step in developing the future of virtual care in Ontario. Additionally, participants outlined that current efforts should be focused on determining what resources currently exist for diabetes and/or virtual care in Ontario and how these resources could be leveraged to develop an integrated and effective virtual care model across the province. They also stressed the importance of engaging key stakeholders (e.g. patients, healthcare providers, policymakers) as partners, and conducting readiness and needs assessments with these groups to ensure that the use of limited resources is aligned with their concerns and goals.

The health system's response to COVID-19 has highlighted how quickly patients and caregivers as well as health care providers, organizations, and decision-makers can adapt and innovate within a virtual care model to meet pressing care needs. Health system decision-makers and key partners can **leverage the discussions summarized in this report to continue to develop and strengthen virtual care models** in order to improve healthcare for Ontarians with diabetes and other chronic conditions.

Appendix A: Research Round Table Agenda – September 29th, 2020

Roundtable description

This event will engage stakeholders in advancing approaches for patient-centered complex chronic disease management in Ontario focusing resources on comprehensive virtual health care services for persons with diabetes, mental health disorders and multiple chronic conditions. It will take into account co-design of approaches, relationships between chronic conditions and health outcomes, the impact of COVID-19 and social determinants of health on the ability to deliver and use virtual care approaches.

Agenda

1.30pm: Welcome from Vasanthi Srinivasan (*OSSU Executive Director*)

1.35pm: Opening remarks from the facilitator

3. Eddy Nason (*Assistant Director, OSSU*)

1.40pm: Success Factors for Complex Chronic Disease Management - Diabetes as an Exemplar

4. Lori Sutton (*Regional Facilitator, Toronto Diabetes Care Connect, South Riverdale Community Health Centre*)

1.55pm: Reflections on Diabetes Specialist Engagement in Delivering Virtual Care during COVID

5. Gary Lewis (*Principal Investigator of Diabetes Action Canada – CIHR SPOR Network in Diabetes and Its Related Complications; Director, Banting and Best Diabetes Centre, University of Toronto*)

2.00pm: The STOP Program as a Model for Integrated Virtual Care for Complex Chronic Disease

6. Peter Selby (*Senior Medical Consultant and Clinician Scientist, Centre for Addictions and Mental Health; Director, Smoking Treatment for Ontario Patients (STOP) Program*)

2.20pm: Reflections on Creating a Value-Based Solution for Diabetes and Complex Chronic Disease Management

7. Catharine Whiteside (*Executive Director, Diabetes Action Canada*)

2.25pm: Thoughts from a Patient Perspective – Virtual Care in Diabetes

8. Lorraine Bayliss (*OSSU Patient Partners Working Group*)

2.30pm: Questions and facilitated discussion

2.55pm: Final Thoughts and Next Steps

9. Vasanthi Srinivasan (*OSSU Executive Director*)



Appendix B: Summary of Presentations

Success Factors for Complex Chronic Disease Management - Diabetes as an Exemplar

Lori Sutton - Regional Facilitator, Toronto Diabetes Care Connect, South Riverdale Community Health Centre

Lori will share her experience in supporting integrated care programs in the Toronto region that serve persons with diabetes and multiple chronic conditions many of whom at high risk for adverse health outcomes. She will highlight what she and her colleagues have learned about the perspectives of patients who have high needs and require the coordinated engagement and monitoring of multiple health disciplines to maintain wellness. Her relationships with health care providers as well as her knowledge of programs & services in the Toronto region inform her understanding of the success factors and barriers for establishing successful integrated care paths for persons whose social determinants are critically important in enabling self-management of their complex conditions.

Diabetes Specialist Engagement in Delivering Virtual Care during COVID

Gary Lewis - Principal Investigator of Diabetes Action Canada – CIHR SPOR Network in Diabetes and Its Related Complications; Director, Banting and Best Diabetes Centre, University of Toronto

Gary will describe his experience in establishing virtual care for his practice of caring for complex diabetes patients during COVID. This has revealed the need for enhanced IT-assisted virtual diabetes team care that must include community-based health and social services to serve all the needs of persons at high risk of co-morbid complications. We have entered the era of virtual care that is here to stay and can transform medical practice improving patient outcomes and reducing health care costs.

The STOP Program as a Model for Integrated Virtual Care for Complex Chronic Disease

Peter Selby - Senior Medical Consultant and Clinician Scientist, Centre for Addictions and Mental Health; Director, Smoking Treatment for Ontario Patients (STOP) Program

Peter will discuss the development and success of the Ontario STOP program that is a virtual team-based smoking cessation treatment and counselling support service. This program has treated over 250,000 Ontarians in their effort to stop smoking. Over 330 organizations and sites in Ontario are engaged in the STOP program including Family Health Teams, Community Health Centres, Addiction Agencies, Nurse Practitioner Clinics, Indigenous Health Organizations and Public Health Units. This model has been embraced by primary health care professionals that improves their workflow and has helped identify comorbid conditions and social determinants that are drivers of health care utilization. He will present how this model can be adapted for the virtual care of persons with complex chronic conditions by focusing on precision interventions co-designed through shared decision-making between the patient and providers. Innovations include add on interventions to connect with specialist and community services for their patients who have 24/7 access to a health coach and navigation of the health system.



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Creating a Value-Based Solution for Diabetes and Complex Chronic Disease Management

Catharine Whiteside - Executive Director, Diabetes Action Canada

Catharine will present the strategic directions of the SPOR Network in Diabetes and Its Related Complications to design, implement and evaluate a model of data-informed digital diabetes health services building on the STOP program model in Ontario. The goal is to utilize integrated health data to identify and reach out to persons with diabetes at high risk of adverse outcomes based on health and social determinants. They will be offered access to a virtual health program led by a health coach and navigator who will assist in co-designing a customized pathway to promote improved self-management that supplements and supports primary care. Quality outcomes, health system cost and the experiences of both patients and their primary care providers will be iteratively evaluated to create a learning health system. Built into the design from the outset will be the feasibility of scale and spread of this comprehensive virtual health care model.