Technology Enabled Collaborative Care (TECC) for Adults with Diabetes: Results from a Feasibility Study

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INTRODUCTION

Type 2 Diabetes (T2D) is a significant health problem. Those living with T2D are at a greater risk for mental health issues such as depression, addiction, and distress compared to the general population.

Individuals living with T2D and mental health issues must navigate a **fragmented healthcare system** to get physical and mental health services from various care providers across various care settings.

The response to COVID-19 has accelerated the emergence of virtual care across primary and specialist care in Canada. However, **there is a need for innovative service models to improve siloed care delivery for those living with both T2D and mental health issues.**

METHOD and OBJECTIVES

Explanatory sequential mixed methods study to:

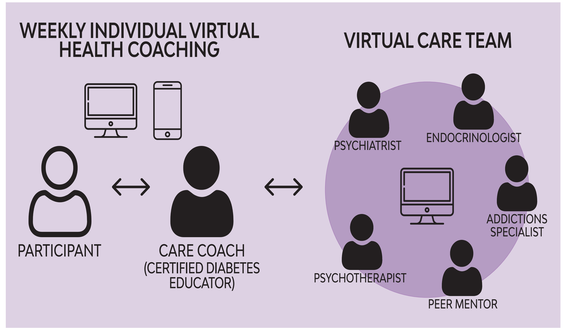
1) Assess the feasibility of the TECC-Diabetes program
2) Understand participant and provider experience and satisfaction

TECC-DIABETES MODEL

8-week virtual, collaborative, and integrated care intervention addressed both diabetes and mental health symptoms. Building on the original TECC model[1], this program was co-designed with partners, including those with lived experience, and providers to leverage existing assets and be delivered using widely available technology (telephone, webconferencing, web-based data collection).

Co-re-designed model included:

- One-to-one coaching with a Certified Diabetes Educator
- Case management, monitoring from a multidisciplinary virtual care team
- Self-management education and resources
- Psychosocial support using CBT-based strategies
- Behaviour design to promote goal setting and attainment



FINDINGS

TECC-Diabetes Program Feasibility

31 Participants were recruited from the STOP database; 4 participants dropped out

PARTICIPANT CHARACTERISTICS AT A GLANCE

Sex	Female 48% (*n*=15)
Age	57 years, average (*SD*=9.89)
Level of Education	At least some college 68% (*n*=21)
Employment Status	Not working / Permanently unable 87% (*n*=27)
Household Income	$40,000 or less 48% (*n*=15)
Years with Diabetes	9 years, average (*SD*=7.15)
Current Medication Use	Insulin 19% (*n*=6)
Concern about Supplies	Current or past concern 61% (*n*=19)

Living with diabetes is a daily struggle:

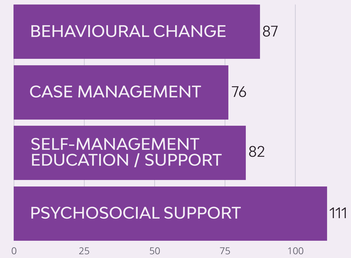
*"For the longest time I would avoid restaurants. I was angry about [having diabetes]. I've come to terms with the fact that, you know, this is what it is, and **I have to live around it**." - TECC Participant*

PROGRAM ENGAGEMENT:

- Average of 6 visits over 8 weeks
  - Telephone only (35%)
  - Web conferencing only (23%)
  - Combination of both (29%)

Broad recommendations included:

- Dietary modification
- Exercise modification
- Glucose monitoring
- Medication adherence / adjustment
- System navigation / external referrals



FREQUENCY OF COACHING STRATEGIES USED ACROSS ALL VISITS

Participant and Provider Experience

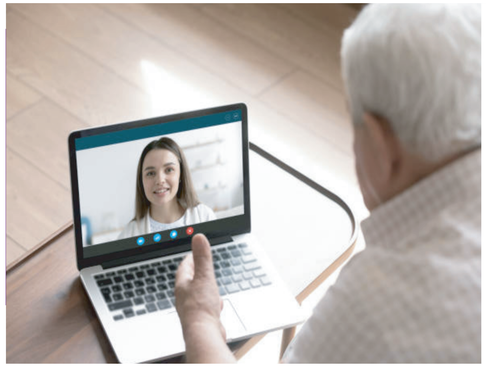
11 Participants and 5 Virtual Care Team Members completed interviews

PROGRAM COMPONENTS

- **Virtual care** was described as practical and effective. Participants valued not having to manage the challenges of in-person appointments for routine care needs. Care team members reported efficient communication and envisioned future rural / remote applications of this model
- Having a **care coach** supported by a **virtual care team** provided a level of care described as "*over and above*" what participants had previously experienced. The expertise of the care coach contributed to greater knowledge, skill, and goal attainment leaving participants highly satisfied
- Care team members also described positive outcomes as a result of being part of the virtual care team. This included increased knowledge and skill (e.g., smoking cessation, learning from lived experience) reflective of the **collaborative** professional expertise
- Recognized as interconnected, participants appreciated the clinical **integration** of physical and mental health care in the program. This was described as "*missing from diabetes care*" and, for one participant, acknowledged that they were, "*much more than just the sum of my parts*"

PROGRAM DELIVERY

- Participants and providers described an opportunity for further flexibility regarding the **frequency** of program visits and the overall **duration** of the program. This was reflective of individual needs and context and included a desire for a more gradual discharge from the program



The TECC model is a **feasible and scalable care solution** that empowers individuals living with Type 2 Diabetes and mental health concerns to take an **active role in improving their physical and mental health:**

"It never felt like we were doing anything really structured. It was like having a chat with a friend, but that friend had all this knowledge and this team of specialists to support her. It didn't feel like she was following an itinerary or that she had specific steps to follow. It was organic and specific to me, and I think that's why I was able to make some big changes for both my physical and mental health – changes that I have needed to make for many, many years." - TECC Participant

@CarlyWhitmore @PSQuitSmoking

Interested in learning more about TECC? Contact carly.whitmore@camh.ca

1) Melamed, O., Voineskos, A., ... Selby, P. (2022). Technology-enabled collaborative care for youth with early psychosis: Results of a feasibility study to improve physical health behaviours. *Early Intervention in Psychiatry*. https://doi.org/10.1111/eip.13266