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Stakeholders' perceptions of a nurse-led telehealth case management intervention in primary care for patients with complex care needs: a qualitative descriptive study

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ABSTRACT

Objective With the onset of the COVID-19 pandemic, telehealth case management (TCM) was introduced in primary care for patients requiring care by distance. While not all healthcare needs can be addressed via telehealth, the use of information and communication technology to support healthcare delivery has the potential to contribute to the management of patients with chronic conditions and associated complex care needs. However, few qualitative studies have documented stakeholders' perceptions of TCM. This study aimed to describe patients', primary care providers' and clinic managers' perceptions of the use of a nurse-led TCM intervention for primary care patients with complex care needs.

Design Qualitative descriptive study.

Setting Three primary care clinics in three Canadian provinces.

Participants Patients with complex care needs (n=30), primary care providers (n=11) and clinic managers (n=2) participated in qualitative individual interviews and focus groups.

Intervention TCM intervention was delivered by nurse case managers over a 6-month period.

Results Participants' perceptions of the TCM intervention were summarised in three themes: (1) improved patient access, comfort and sense of reassurance; (2) trusting relationships and skilled nurse case managers; (3) activities more suitable for TCM. TCM was a generally accepted mode of primary care delivery, had many benefits for patients and providers and worked well for most activities that do not require physical assessment or treatment. Participants found TCM to be useful and a viable alternative to in-person care.

Conclusions TCM improves access to care and is successful when a relationship of trust between the nurse case manager and patient can develop over time. Healthcare policymakers and primary care providers should consider the benefits of TCM and promote this mode of delivery as a complement to in-person care for patients with complex care needs.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ The qualitative descriptive design provided an in-depth understanding of telehealth case management (TCM) from the perspective of those delivering and receiving the intervention.
⇒ The description of stakeholders' perceptions on TCM in primary care for patients with complex care needs provides findings that can be transferred to similar settings.
⇒ Some interviews were conducted during waves of COVID-19 infections and may have impacted participant's perception of TCM.

INTRODUCTION

Patients with a combination of physical and mental health conditions, drug interactions as well as social vulnerability are sometimes referred to as patients with complex care needs and they present the greatest challenges to the healthcare system and providers.[1] This population can benefit from case management (CM) interventions with improved health outcomes.[2 3] CM is a collaborative process of assessing patients' and their families' health needs, planning and coordinating their care with the use of available health and social resources. It involves examining patient care and health outcomes to improve quality of care and health, as well as system efficiencies.[4]

With the onset of the COVID-19 pandemic, it became necessary to use telehealth for healthcare delivery in primary care settings. There are multiple definitions of telehealth in the literature, with telehealth and telemedicine often being used interchangeably.[5] The Health Resources and Services Administration (USA) defines telehealth as 'the use of electronic information and telecommunication technologies to support long-distance clinical healthcare, patient and professional health-related education, health administration and

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public health'.[6] For the purposes of our study, telehealth is defined as the use of telephone, text message, email and video conferencing in the delivery of healthcare, education and self-management support by distance. This definition does not include telemonitoring and ambulatory monitoring.

At the height of the pandemic, when public health measures and patients' concerns about their safety restricted access to primary care settings, the use of telehealth was critical especially for patients with complex care needs, a population with the potential to benefit the most from continued remote care.[7 8] The pandemic resulted in case managers having to modify their clinical practice to expand telehealth CM (TCM).[9] Interestingly, in 2006, well before the COVID-19 pandemic, Park[10] found that the use of TCM was growing with case managers who were some of the earliest providers to use telehealth. It has also been used by a variety of healthcare providers prior to 2020, due to its cost-effectiveness.[5]

Telehealth works well when administering CM because it facilitates more frequent and easier contact with patients.[10] Specifically, telephone support used in CM has shown good potential in decreasing outpatient visits after discharge for patients with multiple complex conditions.[11] A scoping review by Beland *et al*[12] found that TCM was associated with lower healthcare costs and positive patient outcomes. Although lack of face-to-face contact was a noted drawback, overall delivery of CM interventions through telehealth was generally found to be effective and acceptable based on positive patient outcomes, such as better quality of care, improved mental health functioning and decreases in healthcare costs. A scoping review by Joo and Liu[13] identified weaknesses and strengths of TCM for patients with chronic conditions. They reported that patients may face challenges in learning and using technologies and that TCM could increase workload for case managers. However, they documented that TCM has important benefits, such as providing efficient and timely care, improving access to care, increasing patients' satisfaction and reducing healthcare costs. Both of these reviews included few qualitative studies documenting stakeholders' perspectives on TCM and none captured the perspectives of multiple people involved within the same programme. This paper aims to describe patients', primary care providers' and clinic managers' perceptions of a nurse-led TCM intervention for primary care patients with complex care needs.

METHODS

Study design

This study was conducted as part of a larger research programme called PriCARE. This programme implemented CM in five Canadian provinces where a 12-month nurse-led CM intervention was carried out for patients with complex care needs within primary care settings.[14] A qualitative descriptive design[15] was used for this study to capture how patients, providers and clinic managers who were all participating in the same programme perceived TCM. This approach allowed the researchers to gather rich descriptions of TCM from the perspective of those delivering and receiving the intervention.[16]

Telehealth case management

The TCM intervention was developed from a CM intervention implemented in the PriCARE programme consisting of four components based on Canadian and American guiding principles[17 18] and prior studies[19–24] on CM in primary care for patients with complex care needs: (1) assessment of the patient's needs and preferences; (2) codevelopment and maintenance of a patient-centred individualised service plan (ISP), that is, a plan created with the patient, family and other partners to coordinate services required to meet the patient's life plan (goals and desired outcomes); (3) coordination of services among all partners and (4) education and self-management support for patients and families. The intervention was delivered by nurse case managers over a 6-month period, in collaboration with family physicians and other health providers, if needed. The nurse case managers received training on the intervention and motivational interviewing and were supported by clinical tools and an expert in CM, their health manager and the research team. The CM intervention implemented in the PriCARE programme is detailed elsewhere.[14] The TCM intervention offered the same components as the main study but was offered by telephone, text message or email, as well as in-person when possible, to patients with complex care needs who were impacted by a disruption of services during the COVID-19 pandemic. Frequency of contact was determined by the nurse case manager and the patient. None of the people interviewed received or delivered TCM by video conferencing due to a lack of access to or interest from patients and providers in that mode.

Settings

This study was conducted within three primary care clinics, in three provinces: New Brunswick, Nova Scotia and Newfoundland and Labrador. The three primary care settings included: (1) a collaborative family health team comprised of family physicians, a nurse practitioner and a family practice nurse; (2) a collaborative family health team comprised of family physicians, nurse practitioners, registered nurses, licensed practical nurses and recreational therapists and (3) a teaching clinic associated with a medical school, with family physicians, medical students, registered nurses and licensed practical nurses.

Data collection

Participants were patients of primary care clinics (n=30) recruited for CM as well as clinic healthcare providers (n=11) and clinic managers (n=2) recruited through purposeful sampling.[25] They were approached about the study by telephone or email by a research coordinator (ADP, DH and CS) responsible for data collection. In some cases, research coordinators had a prior relationship

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with healthcare providers and clinic managers because they worked together to implement CM in their clinics.

Patients enrolled in the study participated in a semi-structured individual telephone interview. Healthcare providers comprised of family physicians, nurse practitioners, nurse case managers as well as a clinic manager based at the study's primary care clinics participated in a semistructured individual telephone interview. A virtual focus group was held at one of the study primary care clinics with family physicians and a clinic manager. Individual interviews and the focus group were conducted by the research coordinators trained in qualitative interview methods. The interview guides were created by the research coordinators with feedback from study investigators and patient partners (online supplemental appendix 1 and 2). They included questions concerning the suitability of telehealth for the various components of CM, satisfaction with care received or delivered through different delivery modes as well as facilitators and challenges of TCM. The individual interviews conducted lasted between 30 min and 60 min and the focus group lasted 45 min. Interviews and the focus group were audio recorded and transcribed verbatim by a trained transcriptionist.

Data analysis

Methods of inductive thematic analysis were used to examine the interview and focus group data.[26] The research coordinators who conducted the interviews developed a preliminary code book based on the study objectives and topics identified from a first read of the same three transcripts from interviews with different stakeholders. The code book was shared with the wider research team, including patient partners, to discuss code congruence with their sense of emerging themes. The team, including researchers and patient partners, met two times to discuss, refine and build consensus on the code book, adding codes and elaborating on code descriptions. The finalised code book was then used by the research coordinators to code all transcripts using NVivo V.12 server software (QSR International Pty) for data organisation and management (online supplemental appendix 3). Each transcript was coded by two coders and the coding team met several times to discuss and refine their coding approach. Coding reports were produced from NVivo V.12 and data were entered into a table, organised by theme and by participant type (patient or providers/nurse case manager/clinic manager).

Patient and public involvement

Patient partners from the PriCARE research programme were involved in the following aspects of the current study: (1) development of the research objectives; (2) planning of the research design; (3) development and validation of data collection tools (ie, interview guides); (4) validation of data analysis tools (code book); and (5) drafting of the manuscript.

Table 1 Characteristics of the participants (n=43)

Variable	
Patients	
Gender: n (%)	
Female	19 (63)
Male	11 (37)
Age (years): n (%) one missing	
25–44	4 (14)
45–64	8 (28)
65+	17 (58)
Health providers and clinic managers	
Gender: n (%)	
Female	11 (85)
Male	2 (15)
Profession: n (%)	
Clinic managers	2 (15)
Nurse case managers	3 (23)
Family physicians	5 (39)
Nurses practitioners	3 (23)

RESULTS

Table 1 presents the characteristics of the participants. Most of the participants were women (70%) and a majority of patients were aged 65 and over (58%). Most of family physicians were represented among the health providers.

Participants' perceptions on TCM were captured in three themes, which are presented in the section that follows. Table 2 contains the illustrations to support the themes.

Improved patient access, comfort and sense of reassurance

Patients reported three main advantages of TCM. First, patients found that TCM facilitated their access to healthcare. It decreased time off work, did not require need for childcare and reduced waiting times associated with not having to physically attend appointments. Patients who face travel-related barriers in accessing their primary care clinic due to a lack of transportation, long travel time or distance, physical disabilities that limit mobility or other socioeconomic barriers to attending in-person appointments, appreciated TCM. They noted that receiving TCM allowed them to connect with a provider more easily and more frequently and was, therefore, an advantage and benefit to their care. Second, patients reported a greater sense of ease with TCM and the ability to attend appointments from their own home. They noted that in-person appointments can feel overwhelming when receiving multiple pieces of information regarding their health, while TCM appointments allow them to feel more relaxed and less pressured to think on the spot when asked questions by their provider or nurse case manager. Finally, TCM was reassuring to patients because it allowed them

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Table 2 Overarching themes, subthemes and quotes that characterise patients, primary care providers and clinic managers' perceptions of TCM

Theme	Subtheme	Quotes
Improved patient access, comfort and sense of reassurance	Access to care	*To book an appointment and have them come to that appointment it's too complicated for them so having telephone consults is a lot easier for them especially some of them that have kids or mobility issues and getting out…would be very challenging* (Nurse case manager #2, individual interview).
	Comfort of TCM for patients	*You don't have to wait to meet up with anybody, you don't have to you know sit in an office or anything you can just sit comfortably and talk on the phone*. (Patient #5, individual interview).
	Sense of reassurance	*The advantages on the phone is I don't get paranoid cause of COVID. I don't have to worry about getting a sitter, I don't have to worry about] getting ready and having to worry if I'm gonna be sore that day or ready and am I able to get ready*. (Patient #11, individual interview).
Trusting relationships and skilled nurse case managers	Establishment of trust and rapport	*Once you get the trust established and meet the person then the telehealth you know that becomes part of you know what you do* (Provider #4, individual interview).
	Nurse case manager skills and ability	*You know,(they're)not rattling papers [on the telephone] and saying, 'Oh, what did you say?' or anything like that. It's I'm listening to you. Tell us what you need or what can I help you with? You know. Where can you go – OK, let me see where I can get you to go here or there, right?* (Patient #3, individual interview).
Activities more suitable for TCM	Activities that do not require physical assessment or treatment	*I think like phone in terms of a rapid follow-up of after they had an emergency room visit, I think that is ideal. I think you know a quick kind of check in phone call you know: «How are you doing? and what could you do like do you need any more support or information like education?». Then developing a quick turnaround time for phone. (…) I think though in terms of when you look at individual, individual like service plans and also really kind of take a patient centered approach, I think when you get into more complex issues, you know whether it be mental health or chronic healthcare condition I think sometimes having that in person contact because its more complicated*. (Clinic manager #1, individual interview)

TCM, telehealth case management.

to receive healthcare without risking exposure to COVID-19, especially when rates of transmission and infection were high.

Providers identified two key advantages of TCM. First, they noted that organising care and resources for patients was very manageable and could be done well by TCM. Providers reported that service coordination and education and self-management support in particular were suitable aspects of CM to be delivered via telehealth. Second, providers noted that TCM enabled patients to carry out preventative healthcare activities such as blood pressure and glucose monitoring at home, thus increasing patients' engagement in and management of their own health between medical appointments.

Trusting relationships and skilled nurse case managers

The success of TCM was largely dependent on trust between patients and their nurse case manager. Many patients spoke about their comfort with TCM as a result of their confidence and trust in the nurse case manager. Patients who reported greater satisfaction with TCM also reported feeling respected and understood by an engaged nurse case manager despite minimal face-to-face contact. According to both patients and providers, nurse case managers who are best suited to leading TCM are those who are clear in their communication, warm and personable, can manage expectations, and set reasonable goals with patients. An initial in-person meeting to review health needs and goals would help to build a trusting relationship between the patient and the nurse case manager. The initial meeting combined with the relationship that continued to develop over the course of the intervention helped them feel at ease with having less face-to-face interaction. Regular contact with the nurse case manager through telephone, email and text message enhanced patients' perceptions of TCM more broadly and helped facilitated comfort with it. Patients reported that receiving email summaries of what was discussed during telephone appointments from the nurse case manager helped them review their progress and plan as well as increased their comfort with their care and their ability to self-manage through TCM. Although face-to-face appointments were viewed as valuable for rapport-building at the beginning of the CM intervention, many patients were comfortable with TCM as the dominant mode of delivery.

Overall, nurse case managers reported that their patients' needs were being met and that they felt a

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connection to their patient via TCM. Participants noted that TCM appointments are more effective if a trusting relationship is already established between both parties. One nurse case manager mentioned that her patients reached out to connect by telephone to check-in and report on their health. She attributed this to an established relationship of trust and communication. Providers also reported that the nurse case manager's comfort with their role, preparedness and clinical practices optimised the success of TCM. Carrying out advance work, such as keeping detailed notes and reviewing them before each follow-up with patients maximised the efficiency and effectiveness of telephone appointments. Nurse case managers reported that they tailored goals and supports to suit patient needs, often by keeping goals in TCM appointments manageable and ensuring that the support and community resources were provided in a way that suited individual patients' capacity to use them.

Activities more suitable for TCM

Patient and provider interviews suggested that TCM is best suited to certain activities of the CM intervention including quick check-ins, follow-ups, prescription refills, patient reminders, service coordination and education and self-management support. Providers noted that in-person appointments are typically required for patients presenting with complex needs that require a physical hands-on assessment. Nurse case managers reported that initial assessment at in-take as well as the ISP meeting, which includes a wraparound service approach plan, is in most cases better executed in person. However, one nurse case manager did report that an ISP meeting could be done over the telephone, if needed. Some providers reported that the lack of face-to-face interaction can obscure visual cues relating to hygiene and posture that could reveal mental and physical health concerns. However, a number of participants noted that video conferencing could bridge this gap between what can be accomplished with in-person versus telephone visits.

DISCUSSION

This study provides insight into how patients, primary care providers and clinic managers perceive TCM. It was a generally accepted mode of primary care delivery and worked well in most patient and provider experiences. Participants found TCM to be useful and a viable alternative to in-person care. All providers reported that TCM was an appropriate form of healthcare delivery for certain types of appointments that do not require physical assessment or treatment.

To our knowledge, this study is the first to describe different stakeholders' perceptions of TCM in primary care for patients with complex care needs. The results are in line with other studies documenting perceptions of TCM for patients with chronic conditions. Kahn *et al*[27] reported on a TCM programme that used telephone monitoring between office visits providing diabetes counselling and facilitated self-care with patient appointment reminders, lab work and specialty referrals. Patients were able to develop trust and rapport with nurses, often initiating phone calls themselves. Similarly, Schmidt *et al*,[28] in a study of how elderly people with multimorbidities perceived a CM intervention using video conferencing, reported that rapport can be established when the case manager has the skill and the ability to promote a trusting environment. A trusting relationship between patient and nurse case manager can be developed by telephone,[29 30] but no specific evidence in the current literature reported that this relationship has been successfully established for patients with complex needs, outside of face-to-face CM. This study shows that a relationship of trust could be developed with this population using a combination of in-person, telephone, email and text message for primary care visits.

TCM has grown in popularity over the past years and is likely to play a larger role in care delivery going forward given its cost-effectiveness and particular utility during the COVID-19 pandemic.[10] Considering that the growing number of patients with complex care needs is likely to exceed the capacity of the healthcare system in the next decade; TCM appears to be a promising solution to greater efficiency in healthcare resource utilisation.[31 32] Telehealth is best suited to patients with complex care needs who require continual care and represent a high proportion of people who frequently need healthcare services.[13] This population reported many advantages for using telehealth, such as the convenience of having healthcare appointments in the comfort of one's own home also reported in other studies, not having to travel, breaking social isolation and receiving timely and frequent communication.[13 33–35] However, case managers have to consider that in-person appointments are still needed for patients requiring a physical hands-on assessment and are generally more appropriate for specific CM activities. Patients with complex care needs could benefit from a hybrid mode of delivery of care: telehealth for regular follow-up and face-to-face appointments for physical hands-on assessment, initial appointments and the ISP meeting. Healthcare policymakers should consider the benefits of TCM, promote this mode of delivery and improve access to TCM for this population.

This study had strengths as well as limitations. Several strategies were conducted to ensure trustworthiness of the study. The diversity in backgrounds of the authors' (family medicine, nursing, public health, anthropology, international development and political studies) brought a variety of perspectives to the data analysis. The description of stakeholders' perceptions on TCM in primary care for patients with complex care needs provides findings that can be transferred to similar settings.[36] A limitation of this study was that the participating clinics did not offer video appointments as part of the TCM, so we could not report stakeholders' perceptions of all possible modes of delivery. This was largely due to clinic infrastructure barriers and perceived lack of technological literacy of

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patients or desire to use video conferencing. The wider context of this research is important as some interviews were conducted during the height of second and third regional waves of COVID-19 infections. In turn, this may have impacted how patients responded to their comfort or lack thereof with in-person appointments, in particular, patients who were immunocompromised due to chronic conditions and/or experiencing challenges to their mental health. We must keep in mind that participants could also have in-person appointments, and it could be difficult to distinguish in-person and telehealth experiences. The interviews and focus groups were conducted by the research coordinators of the programme who did work with staff to implement TCM in providers' and managers' settings. This could have favoured their positive perception of the intervention.

CONCLUSION

TCM was generally perceived as positive and viewed as working well for most patients, primary care providers and clinic managers. TCM improves access to care and is successful when a relationship of trust between the nurse case manager and patient can develop over time. Healthcare policymakers and primary care providers should consider the benefits of TCM and promote this mode of delivery as a complement to in-person care for patients with complex care needs. Future studies could explore which factors influence implementation of TCM.

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Semi-structured interview guide – for patients

Interview guide for the telehealth component of case management – Patients

Reference number: ______________________ Date: ________________________
Location: ______________________________ Time: ________________________
Interviewer: ____________________________
____

INTRODUCTION - to be shared with the participant before the interview
In the past months, you have had appointments with [name of the case manager] at your clinic to help you coordinate your care and move through the healthcare system. These appointments were part of a case management project.

As a refresher, case management has four main steps which are led by a nurse case manager:

1. Assessment of the patient's needs and preferences
2. Development and maintenance of an "individualized services plan" (ISP), i.e. a personalized care plan adapted to patient needs, in partnership with the patient
3. Coordination of services among health and social services partners
4. Provision of education and self-management support for patients and families

The intention of case management is to improve individual health outcomes for people with chronic diseases and who have complex care needs, which can include physical, social, mental, emotional, spiritual and cultural needs. Case management may also help to improve outcomes for the health system as a whole.

Due to COVID-19, some appointments with [name of the case manager] were conducted by phone or video. Some in-person visits may have taken place. This interview will give you the opportunity to share your experience and opinion about these appointments and how it worked for you. We want to understand what made these appointments helpful, what might have been difficult and what could have made it better. This information will help us in planning future options for handling case management. Please remember there are no right or wrong answers to the questions.

Semi-structured interview guide – for patients

FIRST PART:

This part of the interview is about your health situation and the healthcare services that you received from your clinic and other organizations before appointments with [name of the case manager] at your clinic.

Contextualization

1. Could you describe your health situation?
- Physical and mental health conditions
- Health challenges and barriers to good health

To be discussed briefly.

2. Thinking back to a few months ago before you were working with the case manager, could you tell me which health and social services you received?
- Services you received in your clinic (by your family physician, nurse, etc.)
- Services you received at the hospital
- Services you received in the community (pharmacist and community organizations)

To be discussed briefly. Explore whether the patient felt involved/engaged in their individual healthcare and/or in the way their clinic operates, provides service etc., (did the patient have an opportunity to say what they liked or didn't like).
If the patient asks, specify services received in the previous year.

Semi-structured interview guide – for patients

SECOND PART:

These questions are about your experience and opinion of appointments with [name of case manager] by phone or video.

3. Could you tell me why [name of case manager] contacted you for the first time?

4. What happened since this first contact with [name of case manager] (care process, length and frequency of the follow up, services received, providers involved, etc.)?

   Probes:
   Were your needs and preferences assessed by phone, video or in-person? What was that experience like?
   Was the individualized services plan (ISP) development and ISP meeting by phone, video or in person? How was this process for you?
   Was the coordination of services done by phone, video or in-person?
   Was education and self-management support provided to you by phone, video or in-person? What was that experience like?
   **Ask if the patient has been or feels involved/engaged in these steps.*

5. Which forms of telehealth did you participate in (by phone, video, in-person) with [name of case manager] and how often?
   Probes:
   How were each of the case management steps delivered (by phone, video, in-person)?
   What aspects do you think are best done by phone? By video? In-person?
   What's worked well for you and what didn't work well?

6. How do you feel about telehealth (phone, video, and in-person) being used by [name of case manager] to deliver your service?
   Probes:
   How would you describe your experience of the services received from [name of case manager] by telehealth (phone, video, and in-person) so far?
   Have you used telehealth before? Tell me about that.

7. Through telehealth visits (phone or video) do you feel that your needs as a patient are being met and concerns, if any, are being addressed by your provider? Please explain.
   Probes:
   Are you feeling a connection with your provider even though you are not face-to-face?

8. Can you describe advantages and disadvantages of phone, video and in-person visit when interacting with [name of case manager]?

Semi-structured interview guide – for patients

**Try to explore advantages and disadvantages of each of the four steps of case management.*

9. Any other thoughts or suggestions you want to share?

Thank you for your participation. I invite you to email or call me with additional thoughts after the interview if needed.

Semi-structured interview guide – for case managers, clinic managers and focus groups

Interview guide for the telehealth component of case management - for case managers, clinic managers and focus groups

Reference number: ______________________ Date: _________________________
Location: ______________________________ Time: ________________________
Interviewer: ____________________________

INTRODUCTION - ***to be shared with the participant before the interview***
Case management (CM) is a collaborative approach used to meet individual/patient and family healthcare needs using available resources in all sectors of the health and social services system.

CM involves the implementation of **four main steps**, which are its pillars:

1. Evaluation of the patient's needs and preferences
2. Development and maintenance of an individualized services plan (ISP) in partnership with the patient
3. Coordination of services among health and social services partners
4. Education and self-management support for patients and families

The intention of CM is to improve individual health outcomes for individuals suffering from chronic diseases and complex care needs, which can include physical, social, mental, emotional, spiritual and cultural needs. CM may also help to improve outcomes for the health system as a whole.

The target population for this study are patients with chronic diseases and complex care needs. These are patients who are:

- Living with at least one chronic illness (including anxiety or depression)
- Frequent ED or hospital users or primary care users
- Considered by providers as having complex care needs

In the current context of COVID-19, some case management work has been implemented in your clinic using a telehealth approach (over the phone or video). While the plan is to provide care over the phone or by video conference, some in-person visits may still take place. This interview will give you the opportunity to describe the different factors related to your context that facilitated the implementation of case management via telehealth (phone, video conference, and in-person visits), or that acted as barriers to the implementation of telehealth case management in your clinic.

Semi-structured interview guide – for case managers, clinic managers and focus groups

FIRST PART: *The first part of the interview guide is only for clinics with no qualitative data collected during objective 1. For clinics with qualitative data collected during objective 1, this part should be skipped as we have already collected information regarding the context of the clinic.*

These questions are about the description of your clinic, the services offered to patients with chronic conditions and complex care needs, and your relationship with other organizations.

Contextualization

1. How would you describe the culture of your clinic?

Probes:
What is the vision of your clinic, what are the objectives, its values? Is patient engagement a value or mandate of your clinic?How so?
How would you describe the interprofessional collaboration within your clinic?
[If not discussed already] Would you say your clinic prioritizes or strives for patient engagement? By, for example, seeking patient input on clinic or provider practices, or by working collaboratively with patients to make decisions about their health care?

2. How would you describe the services offered by your clinic for patients with chronic conditions and complex care needs?

Probes:
What do you know about these patients and their needs?
Do you prioritize their needs?
What helps and/or hinders your clinic ability to respond to these patients' needs?
How would you describe the communication, collaboration and partnership between professionals in your clinic in the follow-up of these patients?
Before the implementation of the project in your clinic, do any of the professionals at your clinic perform activities related to the case management of patients with chronic conditions and complex care needs? (Explore based on the four components of case management)

3. How would you describe the services offered by your external partners (hospital, community resources, pharmacies, etc.) for patients in your clinic who have chronic conditions and complex care needs?

Probes:
Could you identify the external partners of your clinic that participate in the follow-up of these patients? What service(s) do they offer?
Are the external partners responsive to the needs of these patients? Explain.
What helps and/or hinders your external partners' ability to respond to the needs of these patients?
Do any of your external partners perform activities related to the case management of patients with chronic conditions and complex care needs? (for example, in any of the four components of case management).

Semi-structured interview guide – for case managers, clinic managers and focus groups

*If not discussed above: How would you describe the collaboration between your clinic and external partners for the follow up of patients in your clinic who have chronic conditions and complex care needs? *Discuss in relation to the four components of case management:*

4. What works well in the follow-up of patients in your clinic with chronic conditions and complex care needs?
Probes: services integration, external policies, guidelines, communication, collaboration, etc.
**Discuss in relation to the four components of case management*

5. What does not work as well in the follow-up of patients in your clinic with chronic conditions and complex care needs?
Probes: services integration, external policies, guidelines, communication, collaboration, etc.
**Discuss in relation to the four components of case management*

Semi-structured interview guide – for case managers, clinic managers and focus groups

SECOND PART: *The second section is for all clinics.*

These questions are about your perception of the case management project that's been implemented in your clinic using telehealth.

6. Could you explain how the case management project has been implemented in your clinic?

Probes:
How did you identify the participants?
Only if provider has been quite involved in case management: Can you describe the patients' follow-up in relation to each of the following steps:

1) Evaluation of patient needs and preferences;
2) Development and maintenance of an ISP;
3) Coordination of services;
4) Education and self-management support.

7. Only if provider has been quite involved in case management: For each of the four CM steps, could you tell me the way it was delivered (by phone, video, or in-person)?

Probes:
Could you explain why these choices were made?

8. Based on the information you have so far, how do you feel about the implementation of case management by telehealth in your clinic?

Probes:
What were the advantages of using telehealth? What were the disadvantages?
How would you describe your experience of the case management by telehealth so far?
Have you used telehealth before?
What aspects of the project do you think are best done by phone? By video conference? In-person?

**For nurse case managers, ask: How do you feel about the implementation of case management by telehealth in your clinic? in relation to each of the four components of case management? Which of the four components of case management are best to be done by phone? Video? In-person?*

9. Which elements of case management by telehealth do you perceive as most adaptable to your clinic? Which elements do you perceive as most difficult to implement?

**For nurse case managers, ask them to consider each of the four components of case management.*

Semi-structured interview guide – for case managers, clinic managers and focus groups

10. Through telehealth visits (phone or video) do you feel that patient needs and concerns are being met or addressed by you as a provider?

Probes:
Are you feeling a connection with patients even though you are not face-to-face?

11. As a (interviewee's profession), how comfortable and prepared do you feel to participate in the implementation of case management by telehealth??

**For nurse case managers, how comfortable/prepared are you to take the lead on carrying out the four components of case management?*

12. Are there other topics that were not discussed that you would like to address?

Thank you for your participation.

Codebook – TCM analysis

Nodes:

- **Adaptability of TCM** – any mention of elements of TCM that are easy to adapt versus difficult to adapt.
- **Adjusting to TCM** – modifying technique, diagnostic practices, developing understanding of what can be done virtually vs f2f, evolving/honing that skill, creativity and innovation
- **Advantages of F2F** – reasons respondent prefers or benefits from face-to-face appointments i.e., feel seen/heard, having providers around the table, can handle multiple issues better, physical exam, provider gets more information, improved relations with provider/support staff, explicitly relating to TCM
- **Advantages of TCM** – reasons respondent prefers or benefits from telehealth modes of CM delivery, may include comparisons of care/experience before vs after telehealth was used. May include reported advantages like patients like option, saves patients time and money, allows service provision to broad catchment area, see patients in timely manner, time saving, speed of service, decongests clinic/better use of resources (particularly for small needs like prescription refills, blood work req, blood pressure check), easy to reach out/engage, can see more patients, promotes regular calls/meetings, avoid risk of virus transmission in waiting room, easier to have patient advocate attend appt.
- **Barriers to TCM** - wait times for services can stall TCM progress, patient access to and comfort with tech
- **Billing –** any mention about implications of TCM for fee-for-service and whether that affects perspectives/use of TCM
- **Clinic context facilitating TCM** – aspects of the clinic context etc. that facilitated TCM, Existing Telehealth practices/infrastructure, policies
- **Covid** – any mention of covid in relation to TCM, how covid has changed context/preparedness/receptivity/comfort for using telehealth
- **Disadvantages of TCM** – downsides to or challenges of TCM i.e., limited non-verbal cues (expressions, self-care, mobility), provider gets less visual information, easier to no-show, phone tag
- **Facilitators of TCM** – those serving broad catchment see its value, reading the patients' needs/preferences, presence of NCM, training, patient previous experience with telehealth
- **Mode of TCM** – F2F vs phone vs video, may capture rarity/challenges /misconceptions re video and whether it was offered as an option, and reason for modes, Combination/blend of modes, preferred mode
- **Nature/purpose of appointment** – any mention of the appointments that are best done by TCM vs in person e.g., ISP vs quick check in etc., need for physical assessment

- **Previous experience with TCM** – any mention of experience with telehealth (phone or video) prior to CM
- **Satisfaction with TCM** – quotes about being happy with TCM, patient needs being met, comparisons between TCM and F2F
- **Trust/rapport** – any mention of provider-patient relationship as it relates to TCM e.g., in-person helps develop trust, prefer to have F2F appointment to start, provider can read the patients' needs/preferences to determine mode, TCM limits relationship building, patient may have concerns about confidentiality/privacy of TCM