ORIGINAL RESEARCH

Virtual Goals of Care Consultation for Advanced Frailty: a Qualitative Implementation Study Providing Insights from the Pandemic

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ABSTRACT

Background

During the COVID-19 pandemic, long-term care (LTC) facilities faced challenges in establishing appropriate goals of care (GoC) for residents during health crises. To address this, a virtual specialist consultation program was implemented to align care interventions with residents' frailty and expected outcomes.

Methods

We explored barriers and enablers to the implementation and sustainability of the program using structured interviews (n=20) with LTC leadership, health-care staff, and members of the program. Data were coded according to the constructs of the Consolidated Framework for Implementation Research (CFIR) using thematic analysis.

Results

Participants described how the program improved care and reduced unnecessary transfers. Implementation was enabled by a high degree of tension for change, relative priority, relative advantage, and the team's shared mental model of frailty-care. Inconsistencies in GoC approaches and information silos between LTC and acute-care challenged implementation. Sustainability was hindered by decreased pandemic urgency, resulting in reallocation of resources to usual care. The need for a specialized GoC service in LTC became less obvious outside of a crisis.

Conclusions

This implementation study provides important insights for future spread and scale of embedding virtual specialist consultation services into LTC. The findings underscore the importance of collegial relationships and shared care philosophies to effectively implement frailty-informed care initiatives during crises. However, sustaining cross-sectoral GoC services may be challenging amidst evolving workloads and prevailing cultural perceptions of end-of-life care needs.

Key words: implementation science, consolidated framework for implementation research, frailty-informed care, virtual care, specialist care teams, goals of care, advanced care planning in long-term care

INTRODUCTION

The first wave of the coronavirus pandemic (COVID-19) posed a significant risk to older adults living in long-term (LTC) facilities.[1] Most LTC residents have a high degree of frailty,[2] defined as the lifelong accumulation of health deficits leading to a decline in function, mobility, and/or cognition.[3] Frailty increases vulnerability to poor outcomes from acute illness, as evidenced during the first wave of COVID-19 in Canada, where 81% of deaths were among older adults in LTC facilities.[4] The severity of outbreaks in LTC highlighted the urgent need for policy change to better support the LTC sector,[5] including "care-in-place" protocols to mitigate overwhelming hospital resources. These protocols aimed to discourage unnecessary transfers of frail LTC residents with COVID-19 to hospitals, focusing instead on improving on-site care for those unlikely to benefit from critical care interventions.[6–8]

During the first wave of the pandemic, health-care leaders launched various initiatives to enhance care, improve communication, and increase resources for frailty-informed care.[9] In Ontario, Canada, the *LTC Plus* collaborative care program used virtual general internal medicine consultations, nursing navigator support, rapid diagnostic access, and educational resources, to enhance nursing home care and reductions in unnecessary acute care transfers during the

pandemic.[10] In Nova Scotia, Canada, our team of six academic internists (NS, LM, APM, AMKN, MvM, PM) developed and studied the impact of the MED-LTC program which offered virtual internist and specialist nurse practitioner consultation to inform and update goals of care (GoC) for LTC residents. The MED-LTC approach to care planning was based on the Palliative and Therapeutic Harmonization (PATH) approach to frailty-informed care and the best available evidence at the time of implementation.[11]

The MED-LTC program had four objectives:

1. Build Capacity in LTC for Medical Management—support and empower LTC Primary Care Providers (PCPs) to deliver appropriate care during COVID-19 outbreaks, ensuring the right patient receives the right care in the right place.
2. Enhance the Care Planning Experience Through Information Sharing—GoC discussions were conducted using a validated communication strategy that focuses on providing information to patients or their decision-makers for shared decision-making.[11]
3. Improve Clinical Care Delivery—ensure that residents' care plans are aligned with frailty and prognosis; support LTC staff in implementing these care plans to reduce unnecessary transfers to acute care.
4. Foster Collaboration Between LTC PCPs and Acute Care Specialists—strengthen communication and coordination between these interdisciplinary care providers working at different sites, including through shared documentation.

The program resulted in decisions for less aggressive care. Post-consultation, 83% (52 of 63) of participating long-term care residents (or their decision-makers) de-escalated care plans. Sixty-two per cent decided against hospitalization compared to 7% pre-consultation. Notably, these patients had previously undergone a conventional care-planning process, reinforcing the principle that sharing detailed information about an individual's health status changes decisions.[6]

This paper presents a qualitative post-implementation study that systematically explored the effectiveness and sustainability of the MED-LTC program.

METHODS

This retrospective, qualitative study employed structured interviews with the implementation team, LTC staff, and LTC leadership to gather data about the MED-LTC program after it had ended. The primary objective was to identify factors supporting implementation to inform ongoing collaboration for frailty-informed care delivery. The study was approved by the Nova Scotia Health Authority Research Ethics Board, Ref No. 26635.

Theoretical Framework

We used the Consolidated Framework for Implementation Research (CFIR) to guide data collection and analysis, as this framework considers micro-, meso-, and macro-level factors in program implementation and the implementation process itself.[12] The framework describes constructs known to influence implementation success across five domains: intervention characteristics, outer setting, inner setting, characteristics of individuals, and the process used for implementation. We used the most recent version of the CFIR available at the time of the study;[12] however, theory building is an iterative process and updated versions of the framework have been published since we completed our research.[13]

Interview Process

The interviewers were graduate-level evaluation specialists (TM-author, AM). The lead qualitative analyst (TM) has over 15 years of qualitative research experience and has published in the field of frailty care. Interviews were conducted by phone or video call, with an email response option for those unable to participate in an interview. Interviewees and email respondents received the same set of questions as found in the interview guide (see Appendix A).

Data Analysis

Data from interviews and emails were recorded, transcribed, and de-identified before being uploaded into NVivo 12 (QSR International (Americas) Inc., Burlington, MA) for analysis using the CFIR coding template.[14] An NVivo project template with pre-populated CFIR codes and queries was provided by the authors of the CFIR and used to map responses to each construct. Team members (TM, PM, LM, NS, AMKN, MB) worked in pairs to code interview transcripts to each construct. The interpretation of the constructs from each analysis file was further refined by a smaller working group (NS, PM, TM, MB). Post-coding, a thematic analysis on 'sustainability' was conducted by pulling data from each domain since this theme was not captured in the initial version of the CFIR used for this study. Domain summaries included dominant CFIR constructs in brackets.

RESULTS

Participant Characteristics

Twenty participants were recruited (17 interviews, 3 email responses) including: seven MED-LTC clinicians, four administrative members, and nine LTC staff, including leadership, from four LTC facilities. Participant characteristics are outlined in Table 1.

Domain Summaries

A summary of each domain's prevailing themes and constructs with representative quotes is provided in Table 2.

Outer Setting

Advocacy for care-in-place strategies for frail residents in LTC, along with the rollout of virtual care fee-codes and the automatic registration of the province's specialists with video conferencing accounts enabled the program's implementation (patient needs and resources). The

TABLE 1.
Participant characteristics

Participant Group	*Gender, (n)*	*Professional Backgrounds, (n)*	*Career Stage*
Administrative staff	Female (4)	Clerical	Mixed early to mid-career
LTC staff and leadership	Female (7) Male (2)	Nursing Advanced Practice Nursing Primary Care Administration	LTC staff – unknown LTC leadership – late career
MED-LTC staff and leadership	Female (2)	General Internal Medicine (2) Palliative Medicine (1) Geriatric Medicine (3) Nurse Practitioner (1)	Mainly mid-career

pre-program provision of frailty care was described as siloed. There was significant variability in the quality and accessibility of GoC documentation, both within facilities and to health sectors outside LTC, presenting challenges to MED-LTC clinicians. A MED-LTC member described an instance where a LTC resident with a "care-in-place" goal was nonetheless transferred to hospital. The MED-LTC member who completed this patient's GoC was not called by hospital staff (cosmopolitanism).

Inner Setting—LTC

An outbreak in a large LTC facility spurred implementation, driven by the challenges of managing GoC while concurrently caring for infected residents (tension for change, relative priority). The shared commitment to holistic care-planning among LTC facilities and MED-LTC clinicians facilitated a positive reception for the program, aligning with existing values and practices (compatibility, culture). Leadership engagement in establishing the role and timing of MED-LTC consultations helped introduce the service to LTC PCPs. The program addressed a gap in the granularity of LTC GoC documentation, adding details about specific goals, such as whether a resident would accept intubation and intravenous therapies. This intervention became particularly critical as facilities prepared for an increase in care transitions during the pandemic (relative priority, tension for change). Granting MED-LTC access to the LTC electronic medical record was considered a significant enabler by both the MED-LTC and LTC clinicians (networks and communication). Pre-consult communication between MED-LTC and LTC PCPs, when it occurred, helped lay the groundwork for subsequent robust GoC discussions. In hindsight, MED-LTC team felt that building rapport and trust with the LTC team before implementation would have benefitted the program (networks and communication).

Intervention Characteristics

The immediate implementation of the program addressed an urgent need in LTC (intervention source) but posed a barrier to thoughtful and measured program design (trialability). Given their experience working with frailty and acute care, the MED-LTC team integrated emerging evidence for COVID-19 care with GoC planning for LTC residents (adaptability, relative advantage, evidence strength, and quality). The program used a validated, structured, frailty-informed approach to GoC discussions. Each consultation involved several hours of physician time and included a detailed review of health history, function, and cognition using chart review and collateral interviews. This initiative reduced the time and resources LTC providers needed to spend on complex care planning, allowing them to focus on direct care for infected residents (relative advantage). LTC staff indicated that families were more accepting of specialist recommendations about de-escalating GoC compared to usual care-planning processes (relative advantage).

Inner Setting—MED-LTC Operations

MED-LTC team members worked in an academic Department of Medicine in an urban tertiary care centre. Pre-established approaches to care and working relationships among team members had the most significant influence on implementation (compatibility). The ability to connect with colleagues who shared a similar philosophy of care within a "culture of call"—an environment where physicians consult and support each other—was an important incentive (networks and communication). MED-LTC clinicians described the program as a grassroots initiative that disrupted an organizational culture where non-beneficial interventions are often offered to frail, older adults (culture).

Individual Characteristics

For this domain, the "individual" was coded as the entire MED-LTC team. The most influential enabler was the team's prior collaborative experience and shared approach to GoC (knowledge & beliefs about the intervention, self-efficacy). MED-LTC members self-identified as frailty experts who worked in acute care and routinely navigated complex decision-making (individual stage of change, preparation, individual identification with the organization). Adapting this work to LTC virtual consultations was a professionally rewarding contribution to the pandemic response.

Process

Program planning started with casual "what if" conversations that quickly evolved into formalized team meetings among

TABLE 2 (part 1 of 2).
Summary of themes, constructs, and representative quotes by domain

Domain	*Thematic Overview*	*Prevailing Constructs*	*Representative Quotes*
Outer Setting	Program implementation was enabled by recommendations regarding care-in-place for frail patients residing in long-term care (LTC), the advent of virtual care fee codes, and registration of specialists with video conferencing accounts to support remote consultation. Frailty care was described as siloed. Influence of decision maker readiness for consultation varied. There was significant variability in quality and accessibility to existing goals of care (GoC) documentation.	Tension for Change Relative Priority Patient needs and resources Cosmopolitanism	"So when Nova Scotia was confronted with the pandemic, there was provincial-wide planning in terms of trying to figure out how to support people with COVID, how to make sure our resources were used as efficiently as possible…So that there was attention now to the nursing home environment which hadn't been there before. New attention. And so in the nursing home where the outbreak occurred, there was a policy decision to provide care-in-place as much as possible." [Participant 8, MED-LTC team] "I think it's meeting the need for resident and family awareness of frailty prognosis, what a health crisis could look like, how it could be managed. And I think those were previously unmet needs. Because what I hear a lot from decision-makers like families or residents when I'm talking to them is, "I had no idea this was, you know, the situation with this person's health." [Participant 7, MED-LTC team] "...that there is no standard care in long-term care facilities. And it's kind of operated as a third arm of the healthcare system that nobody is really looking at." [Participant 13, MED-LTC team]
Inner Setting (LTC)	A COVID-19 outbreak in one of the largest LTC facilities in the province catalyzed program implementation. A shared philosophy of holistic care planning between LTC and MED-LTC clinicians supported program uptake. The culture of care planning, as well as standardization of process and documentation, varied across facilities. The MED-LTC program addressed gaps in granular advanced care planning.	Relative priority Tension for change Compatibility Culture Leadership engagement Networks and communication	"I think we needed that - this program - because in the midst of COVID, we were busy and we couldn't sit down for two hours and talk to a family member about where their loved one was. And again, you know, the six or seven that we referred to this program were, I would say, the families that expected far more..." [Participant 11, LTC nurse practitioner] "It's [documenting goals of care] important. Like it's essential. Because at 3:00 in the morning when you're trying to make that decision do I send them to the hospital or I don't send them to the hospital, if the family hasn't had that conversation, they're off to the emergency department." [Participant 12, LTC leadership] "I think one of the disadvantages of the program is that we are sort of parachuting into these various facilities that each have their own culture of care delivery and their own processes of care." [Participant 7, MED-LTC team]
Intervention Characteristics	The MED-LTC team was able to integrate emerging evidence for the management of COVID-19 to GoC planning for LTC residents given their experience working with frailty and acute care. Immediate program implementation supported the urgent care needs, but this did not afford time for thoughtful and measured program design. A notable implementation hurdle was disparate health records between LTC and acute-care. Consultations were prioritized to infected residents and afforded hours of physician time to develop informed care planning with appropriate stakeholder engagement.	Intervention source Trialability Networks and communication Adaptability Relative advantage Evidence strength Quality Cost Personal attributes	"I think it [MED-LTC consult service] saved lives. I think it made my team more successful because we were able to focus mostly on caregiving." [Participant 18, LTC leadership] "So having MED-LTC address the goals of care was awesome. You know, that just literally saved days and days of work for me…reinforced that I was making the right decision. So that takes away stress from me. And yeah, also saved the residents unnecessary discomfort and investigations." [Participant 1, LTC PCP] "You know, I think it was an incredible value to have good quality experts who had no skin in the game…give valid opinions, with valid information, to families and residents. And that gave us…you know, got us off the hook. Saying, "Oh, you're just long-term care, and you don't want to send them [to hospital]." And so it became a wonderful liaison with families to reassure them that the resident's interest was in their best interest. And there's no question, there was strong commitment to support their transfer if it was going to be in their [LTC resident] best interest." [Participant 18, LTC leadership]

TABLE 2 (part 2 of 2).
Summary of themes, constructs, and representative quotes by domain

Domain	*Thematic Overview*	*Prevailing Constructs*	*Representative Quotes*
Inner Setting (MED-LTC operations)	Established approaches to care and working relationships among team members had a significant influence on implementation and reflected existing clinical practices among team members. The team scheduled regular weekly meetings to review implementation success, barriers and to discuss specific cases and review outcomes. Team members noted personal and professional satisfaction from their collaborative relations and shared contribution to the COVID-19 crisis response.	Collaborative network Communication Relative priority Access to knowledge Information Compatibility	"But the collaboration [among team members] and tackling some of these problems and providing support to families and…is actually just 1) it's more comprehensive, 2) from a liability perspective, it's documented and witnessed. You know, these conversations are really about people's lives. And the content is heavy, you know. And so it's kind of…it's hard to approach problems like this on your own. And so I think having colleagues and reviewing cases and having that support kind of evolved through this. And so that was great." [Participant 13, MED-LTC team member] "Like what MED-LTC has become, instead of just being a consultation service, for us it's become a fountain of knowledge…that's sort of always been the basic philosophy of the MED-LTC process - that people shouldn't be afraid to ask questions. There should be someone available who could answer questions. And if not, that person could go to another person until the question is answered. And it's like a culture of calling. You know, calling out for help." [Participant 8, MED-LTC Team Member]
Individual Characteristics	For this domain, the "individual" was coded as the entire MED-LTC team. The team was composed of clinicians with expertise in frailty and the most influential enabler was the prior collaborative experience and shared approach to GoC held among team members. Implementation was supported by strong team leadership and skill in advocating for frailty-informed care. The implementation benefitted from the social connectedness of the all-female team members.	Knowledge & beliefs about the intervention Self-efficacy Individual stage of change Preparation Individual identification with the organization	"We frequently get consulted on patients after they've had intensive interventions. And then, you know, we see all the suffering that comes with that. So I think our ability to communicate that to families is pretty effective because we've had that, lived experience of witnessing what that actually looks like for patients and their families. We also have skill in prognostication... that's what we do clinically in our hospital jobs. So I think some of it is just expertise and experience." [Participant 16, Med-LTC team member] "It's why we have this informal network, actually of women. Because it is such emotionally difficult work. And I think if we were doing it in isolation, we all would have long given up. But the fact that we believe in these….we share these values and we practice them, and then we have each other as like an informal support network to vent or whatever, like I do think it keeps us going in the work. And I think just that network in and of itself and that experience… Like I know there's so much work happening around physician burnout, and that networks are like really critical to resilience. So I think our little practice group like outside the context of Med LTC is just a really interesting exploration of like the emotional trauma of this work." [Participant 16, Med-LTC team member]
Process	Program planning grew from informal conversations into a formalized process with regular team meetings, and preliminary program piloting with a small number of residents. This supported program growth. Program execution was impacted by access to information. Redistributed resources (administrative) in acute care supported the program implementation.	Engagement Planning Human resources Technology Executing	"... another sort of attribute is that [MED LTC director] is more likely to ask for forgiveness than permission. And that has been part of what's kind of pushed this forward. She's just like, `We're doing this. Here's our summary. This is happening.'" [Participant 7, MED-LTC team member]

existing social and professional networks when an outbreak was declared in a LTC facility (engagement, planning). The program was piloted with a small number of residents, which created trust between teams to move forward with broader implementation. Program delivery was impacted by variability in LTCs' human resources and technology access, which presented challenges for scheduling and information gathering (executing). Administrative support for scheduling came from diverted specialist resources and was an important enabler (planning). The team adapted program elements based on scheduled and informal debriefs.

Sustainability

There was an evolving understanding of the program as implementation occurred. One team member likened the experience to 'building the plane as we were flying it'. MED-LTC members perceived a declining demand for the program with outbreak resolution. LTC providers perceived that, in the absence of a crisis, existing care-planning processes were adequate. However, LTC leadership and staff expressed a need for ongoing remote consultation service for complex GoC discussions and other health concerns. While the team initially supported requests for non-COVID-19 consultations (adaptability), the resolution of the first COVID-19 wave resulted in the resumption of routine work, which limited capacity for MED-LTC activities and ultimately led to the program's closure. To aid in future iterations of similar programming, we present a summary of implementation recommendations for sustainability in Table 3.

DISCUSSION

The MED-LTC program provided a structured approach to virtual, specialist-supported GoC discussions in LTC. This study examined the barriers and enablers of implementation. Implementation was enabled by a high degree of tension for change, relative priority, relative advantage, and personal attributes including a shared vision grounded in pre-existing social bonds and the team's mental model of frailty-care. The program's success was also due to (i) rapid program set up/delivery, facilitated by reallocating human resources from usual care; (ii) providing technologically agile care; (iii) collaboration between MED-LTC and LTC staff/facilities; and (iv) unrestrained organizational support. The MED-LTC program objectives dovetailed with several circumstances including: the urgency of COVID-19 outbreaks in LTC; longstanding LTC resourcing shortfalls; and pandemic related "care-in-place" directives. The familiarity of MED-LTC members with the PATH framework,[11,15] coupled with pre-existing relationships and a shared desire to improve frailty care were crucial factors in the success of the intervention.

TABLE 3.
Implementation checklist for a Virtual Goals of Care (GoC) consultation service for long-term care (LTC)

□ Ensure virtual care fee codes, protected time, physical and technological space
□ Engage LTC stakeholders to build rapport and understand local need
□ Define program scope, processes and tools to be used
□ Map shared goals between LTC and consultant teams to program deliverables
□ Acquire remote consultant access to view and modify LTC health records
□ Use a validated, structured, frailty informed approach to GoC discussions
□ Ensure access of GoC documentation within LTC and between sectors of care
□ Offer remote, specialist support beyond initial consultation to enhance interprofessional collaboration, especially to support adherence to GoC

Implementation of the MED-LTC program faced several systemic challenges. Key barriers included inconsistencies in access to—and quality of—GoC documentation across LTC facilities, information silos between LTC and acute-care, and differences in approaches to care planning, such as the extent to which decision-makers were informed about upcoming GoC discussions. These issues align with previously described obstacles to providing optimal end-of-life care in LTC settings.[16]

The vulnerability of LTC residents related to COVID-19 infection also highlighted the need for effective care-planning frameworks.[17] The MED-LTC program addressed the need for specialized communication for GoC planning during the pandemic with virtual consultations that used the PATH framework to foster communication, information-delivery, and shared decision-making for frailty-informed care. Health-care providers working in long-term care settings should receive training and support to use validated approaches to GoC conversations and tools that support care planning in LTC populations. For instance, RESPECT-LTC (Risk Evaluation for Support: Predictions for Elder-life in the Community Tool in Long-Term Care) identifies palliative care needs, enhances communication about prognosis, and supports more personalized and patient-oriented care planning. Early findings indicate that education, particularly training on conducting serious illness conversations, significantly improved physicians' and nurses' confidence and comfort in discussing goals, values, and wishes with residents and care partners.[9] Since the pandemic, models have been developed to encourage GoC conversations led by interprofessional teams rather than relying solely on physicians and nurse practitioners. Cranley *et al*. highlight that involving LTC staff, such as personal support workers, can promote shared decision-making and individualized care in LTC settings. This interprofessional approach leverages diverse expertise for shared decision-making, while physicians and nurse practitioners provide deeper insights into residents' medical conditions, enhancing decision quality.[18]

In addition to efforts to enhance care planning, interventions also emerged to support care-in-place directives during the pandemic. These initiatives aimed to reduce

unnecessary hospital transfers and enhance on-site care. The LTC Plus program, for example, utilized a hub-and-spoke model with a virtual Nurse Practitioner resource navigator and provided internist support to LTC staff, thereby improving the quality of care in LTC facilities.[10] Wyer *et al*. found that improved communication between LTC and emergency department physicians reduced the number of transfers from LTC to hospitals during the pandemic.[8]

A central feature of innovation during COVID-19 was the ability to connect providers and patients in the virtual space. Our results reinforce the effectiveness of telemedicine for conducting GoC discussions. Likewise, virtual GoC planning has successfully been delivered in inpatient settings when visitor restrictions limit patient access.[19,20] Connelly *et al*. also explored the impact of using multidisciplinary team video conferencing to implement an evidence-based intervention during COVID in two LTC facilities. The study found that adopting the virtual program effectively addressed residents' needs and responsive behaviours.[21]

The MED-LTC program's sustainability was challenged by increased complexity, cost, and lessened relative priority in the post-acute phase of COVID-19. Despite its significant impact, the insufficient investment in protecting the resources needed to coordinate frailty-informed care between sectors led to program closure. It is therefore unclear whether the acceptance and efficacy of virtual GoC discussions in LTC could persist outside of restrictive circumstances. There is opportunity for further research on the factors supporting the sustainability of virtual GoC programming and the impact of a working group's collective values and trust on implementation success.

CONCLUSION

The MED-LTC implementation study provides important insights to support the future spread and scale of embedding virtual specialist consultation services into LTC. This study is proof of concept that GoC programming can be delivered virtually by specialist physicians in community settings. The analysis underscores the importance of collegial relationships and shared care philosophies to effectively implement frailty-informed care initiatives during health-care emergencies. However, sustaining cross-sectoral GoC services may be challenging amidst evolving workloads and prevailing cultural perceptions of end-of-life care needs. This implementation science study of the MED-LTC program describes the enabling and impeding factors that support the use of a structured, virtual GoC discussion to reduce unnecessary transfers to hospital and promote frailty aligned care plans.

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CONFLICT OF INTEREST DISCLOSURES

We have read and understood the *Canadian Geriatrics Journal*'s policy on conflicts of interest disclosure and declare the following interests: Drs Laurie Mallery and Paige Moorhouse are co-founders of the Palliative and Therapeutic Harmonization clinic (www.pathclinic.ca)

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REFERENCES

1. Fisman DN, Bogoch I, Lapointe-Shaw L, McCready J, Tuite AR. Risk factors associated with mortality among residents with coronavirus disease 2019 (COVID-19) in long-term care facilities in Ontario, Canada. *JAMA Netw Open*. 2020 Jul 1; 3(7):e2015957.
2. Kojima G. Prevalence of frailty in nursing homes: a systematic review and meta-analysis. *J Am Med Dir Assoc*. 2015 Nov 1; 16(11):940–45.
3. Rockwood K, Mitnitski A. Frailty defined by deficit accumulation and geriatric medicine defined by frailty. *Clin Geriatr Med*. 2011 Feb 1;27(1):17–26.
4. National Institute on Ageing. Pandemic perspectives on long-term care: insights from Canadians in light of COVID-19 [Internet]. Toronto, Ontario; 2021 [cited 2024 Feb 29]. Available from: https://www.cma.ca/sites/default/files/pdf/Activities/National-Institute-on-Ageing-CMA-Report-EN.pdf
5. Béland D, Marier P. COVID-19 and long-term care policy for older people in Canada. *J Aging Soc Policy*. 2020 Jul 3; 32(4–5):358–64.
6. Mallery L, Shetty N, Moorhouse P, Miller AP, von Maltzahn M, Buckler M, *et al*. Goals of care conversations in long-term care during the first wave of the COVID-19 pandemic. *J Clin Med*. 2022 Mar 19;11(6):1710.
7. Razak F, Shin S, Pogacar F, Jung HY, Pus L, Moser A, *et al*. Modelling resource requirements and physician staffing to provide virtual urgent medical care for residents of long-term care homes: a cross-sectional study. *CMAJ Open*. 2020 Jul 1;8(3):E514–E521.
8. Wyer L, Guterman Y, Ewa V, Lang E, Faris P, Holroyd-Leduc J. The impact of the COVID-19 pandemic on transfers between long-term care and emergency departments across Alberta. *BMC Emerg Med*. 2024 Jan 7;24(1):9.
9. Hsu AT, Mukerji G, Levy AM, Iaboni A. Pandemic preparedness and beyond: person-centred care for older adults living in long-term care during the COVID-19 pandemic. *Healthc Q*. 2022 Dec 1;25(SP):13–19.
10. Wong BM, Rotteau L, Feldman S, Lamb M, Liang K, Moser A, *et al*. A novel collaborative care program to augment nursing home care during and after the COVID-19 pandemic. *J Am Med Dir Assoc*. 2022 Feb 1;23(2):304–07.
11. Moorhouse P, Mallery LH. Palliative and therapeutic harmonization: a model for appropriate decision-making in frail older adults. *J Am Geriatr Soc*. 2012 Dec;60(12):2326–332.

12. Damschroder LJ, Aron DC, Keith RE, Kirsh SR, Alexander JA, Lowery JC. Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science [Internet]. *Implement Sci*. 2009 Aug 7;4(1):50.
13. Damschroder LJ, Reardon CM, Widerquist MA, Lowery J. The updated Consolidated Framework for Implementation Research based on user feedback [Internet]. *Implement Sci*. 2022 Oct 29;17(1):75.
14. CFIR Research Team-Center for Clinical Management Research. Qualitative data collection, analysis and interpretation using the Consolidated Framework for Implementation Research [Internet]. [cited 2024 Feb 29]. Available from: https://cfirguide.org/evaluation-design/qualitative-data/
15. Mallery L, Krueger-Naug AM, Moorhouse P, Miller AP, von Maltzahn M, Tinning A, *et al*. Transforming communication on serious illness and frailty: a comprehensive approach to empowering informed decision-making. *J Palliat Med*. 2024 Oct 1;27(10):1297–302.
16. Harasym P, Brisbin S, Afzaal M, Sinnarajah A, Venturato L, Quail P, *et al*. Barriers and facilitators to optimal supportive end-of-life palliative care in long-term care facilities: a qualitative descriptive study of community-based and specialist palliative care physicians' experiences, perceptions and perspectives. *BMJ Open*. 2020 Aug 1;10(8):e037466.
17. Wendrich-van Dael A, Gilissen J, Van Humbeeck L, Deliens L, Vander Stichele R, Gastmans C, *et al*. Advance care planning in nursing homes: new conversation and documentation tools. *BMJ Support Palliat Care*. 2021 Sep 1;11(3):312–17.
18. Cranley NM, Cunningham CJL, Panda M. Understanding time use, stress and recovery practices among early career physicians: an exploratory study. *Psychol Health Med*. 2016 Apr 2;21(3):362–67.
19. Wurm E, Gupta N, Neuendorf K, Boissy A, Perez-Protto S. 413: Virtual end-of-life discussions are feasible and helpful [abstract]. Critical Care Congress, Feb. 17-20, 2019, San Diego, CA. *Crit Care Med*. 2019 Jan;47(1):187.
20. Ouellet JA, Prsic EH, Spear RA, Blatt L, Kukulka S, Cronin-Ozyck R, *et al*. An observational case series of targeted virtual geriatric medicine and palliative care consults for hospitalized older adults with COVID-19. *Ann Palliat Med*. 2021 Jun 1;10(6):6297–306.
21. Connelly D, Hay M, Garnett A, Hung L, Yous ML, Furlan-Craievich C, *et al*. Video conferencing with residents and families for care planning during COVID-19: experiences in Canadian long-term care. *The Gerontologist*. 2023 Apr 1;63(3):478–89.

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APPENDIX A.
Interview Guides (4) for LTC Primary Care Providers/Clinical Staff, LTC Administrative Staff, LTC Leadership, and MED-LTC Team Members

Administrative Staff, LTC Leadership, MED-LTC Team Members

LTC PRIMARY CARE PROVIDERS/CLINICAL STAFF INTERVIEW GUIDE

INTRODUCTION

Thank you for taking the time to participate in this interview. The purpose of the interview is to discuss your experience with the MED-LTC Program. MED-LTC was designed as a virtual outreach program to support primary care physicians working in LTC by providing consultation to establish goals of care and support during acute health crises.

With this in mind, the objective of this interview is to gain insight into your experience with the MED-LTC Program. Your input will help inform future program development and implementation. This interview should take up to one hour to complete. Do you have any questions or comments before we start?

Before I begin, I would like you to think about your clinical practice with your patients living in long term care (LTC) prior to the onset of the COVID-19 pandemic.

1. What supports/services/processes exist in your long term care setting to help you care for your residents/clients?

2. What have been some of the challenges in caring for your LTC residents/clients?

3. What have you needed, but did not have available, to be able to provide better care for your residents/clients?

Please keep your responses to these questions in mind as you respond to the following questions

PART I: PROGRAM PURPOSE

1. From your perspective, why was the MED-LTC Program implemented? *[Intervention Sources - IS]*

2. To what extent do current programs, other than the MED-LTC Program, fail to meet the current needs of LTCFs? How is the MED-LTC Program filling the gaps? *[Tension for Change-TC]*

3. Does the MED-LTC Program replace or complement current programs and processes in long term care facilities (LTCFs)? *[Compatibility]*
   a. In what ways? *[Compatibility]*

4. What advantages does the MED-LTC Program have compared to existing programs?
   a. What disadvantages does it have? *[Relative Advantage-RA]*

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PART II: IMPLEMENTATION

5. How complicated has it been to access and use the MED-LTC Program? (e.g. scope, number of processes) *[Complexity]*

6. What changes or alterations did you need to make for the MED-LTC program to work effectively for you? *[Adaptability-A]*

    a. Were you able to make these changes? *[Adaptability-A]*

    b. Why or why not? *[Adaptability-A]*

7. How receptive have you and the LTC facility been to the implementation of MED-LTC? *[Implementation Climate - IC]*

PART III: CLINICAL PRACTICE AND CLIMATE

8. How well does the MED-LTC Program fit within your existing work processes and practices?

    a. Are there any issues or complications? *[Compatibility]*

9. What has your working relationship been like with the team members of the MED-LTC program? *[Networks & Communication – N&C]*

10. What incentives are available to help ensure implementation of the program is successful?

    a. Are you satisfied with these incentives? [*Organization Incentives and Rewards -O,I&R]*

PART IV: LEADERSHIP

11. What level of involvement has your leadership group had so far with the MED-LTC Program*? [Leadership Engagement-LE]*

12. What kind of support has your leadership members given you? *[Leadership Engagement-LE]*

    a. Can you provide specific examples? *[LE]*

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PART V: PATIENTS/FAMILIES

13. In what ways do you think the MED-LTC program is meeting the needs of LTC residents/clients? *[Patient Need & Resources-PN&R]*

14. In what ways do you think the MED-LTC program is meeting your needs as a primary care provider or health care clinician caring for residents/clients in LTC? [Patient Need & Resources-PN&R]

15. How have residents/clients and family members/substitute decision makers (SDMs) responded to the program? *[PN&R]*

16. What barriers have residents/clients and their families/SDMs faced when participating in the program? *[PN&R]*

17. What barriers have you and/or other health care clinicians faced when participating in the program? *[PN&R]*

PART VI: OVERALL IMPRESSION

18. What has been the most beneficial aspect of the program for you?
    a. What has not been beneficial?

19. Will you continue to use the MED-LTC Program on an ongoing basis, and if so, why?

20. What else, other than what the MED-LTC Program offers currently, do you feel you need to support you in your care of LTC residents/clients?

21. What would you tell your colleagues, who may not have yet heard of the program or accessed it, about your experience with the MED-LTC Program?

PART VII: OVERALL COMMENTS

22. Is there anything else you would like to share that we haven't asked about?

23. Are there any other stakeholders that should be consulted with about the program?

LTC Administrative Staff Interview Guide

1. From your perspective, what is the MED-LTC Program and why is it being implemented? *[Intervention Sources - IS]*

2. Tell me what your job responsibilities related to the MED-LTC Program include?

3. What kind of training were you given? *[Access to Knowledge & Information A,K&I]*
   a. Do you feel the training prepared you to carry out the roles and responsibilities expected of you? Can you explain? *[A,K&I]*
   b. What was missing? *[A,K&I]*
   c. Who do you ask if you have questions? *[A,K&I]*
   d. How available are these individuals? *[A,K&I]*

4. How well do the associated tasks of the MED-LTC Program fit within your existing work processes and practices? Are there any issues or complications? [Compatibility]

5. Do you meet regularly with a team or someone in a clinical role to discuss the MED-LTC Program? [N&C]
   a. How often are the meetings? [N&C]
   b. Are they helpful? [N&C]

6. When you need to get something done or have a problem who is your "go-to" person? [N&C]

7. To what extent do you feel you can try new things to improve program processes? [Learning Climate]

8. Overall, how complicated have the tasks required of you been to carry out? (e.g. scope, number of processes) [Complexity]

9. How would you describe your overall experience with working for the MED-LTC Program or carrying out tasks required for the program?

THE ADDITIONAL QUESTIONS BELOW WILL BE ADDED TO THE MED-LTC PROGRAM ADMIN SUPPORT PERSON INTERVIEW GUIDE

What has been your experience with using the Program's EMR? What has been easy and what has been challenging?
What has been your experience with the 24 hour access line? What has been easy to accomplish and what has been challenging?
What has been your experience with scheduling consults? What has been easy to accomplish and what has been challenging?

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LTC LEADERSHIP Interview Guide

PART I: PROGRAM PURPOSE

1. From your perspective, why is the MED-LTC Program being implemented? *[Intervention Sources - IS]*
    a. Who decided to implement the intervention? [IS]
    b. How was the decision to implement it made? [IS]

2. What are the goals of the Program? *[Goals and Feedback – G&F]*
3. To what extent do current programs fail to meet the current needs of LTCFs? How is the MED-LTC Program filling the gaps? *[Tension for Change-TC]*

4. What advantages does the MED-LTC Program have compared to existing programs? What disadvantages does it have? *[Relative Advantage-RA]*

PART II: IMPLEMENTATION

5. How complicated has it been for primary care physicians (PCPs) and other health care clinicians to access and use the program? (e.g. scope, number of processes) *[Complexity]*

6. What changes or alterations were needed in your facility to make the MED-LTC program work more effectively? *[Adaptability-A]*
    a. Were you able to make these changes? *[Adaptability-A]*
    b. Why or why not? *[Adaptability-A]*

7. Do you have sufficient resources to implement the Program? *[Available resources]*
    a. What was easy to procure? *[Available resources]*
    b. What was not available? *[Available resources]*

8. Has your staff used the family/Primary Care Provider (PCP) pamphlets or the PCP worksheet? *[Design Quality and Packaging-D,Q&P]*

    a. If yes, what is your perception of the quality of the supporting materials for the MED-LTC program? *[Design Quality and Packaging-D,Q&P]*

9. How are you communicating with PCPs about the program? *[Intervention Participants]*

    a. What is being communicated? *[Intervention Participants]*

10. How receptive has your facility(ies) been to the implementation of the MED-LTC Program? *[Implementation Climate - IC]*

    a. How receptive have the primary care providers been to the implementation MED-LTC Program? *[Implementation Climate - IC]*

11. Does the MED-LTC Program replace or complement other programs and processes in the LTCFs? *[Compatibility]*
    a. In what ways? *[Compatibility]*

12. How has your organization's culture (general beliefs, values, assumptions that people embrace) affected the implementation of the intervention? *[Culture]*

    a. Can you describe an example that highlights this? *[Culture]*

PART III: CLINICAL PRACTICE & CLIMATE

13. How well does the MED-LTC Program fit within the LTC facility's existing work processes and practices? *[Compatibility]*

    a. Are there any issues or complications? *[Compatibility]*

14. How important do you think it is to implement the MED-LTC Program compared to other priorities in your facility? *[Relative Priority- RP]*

15. How will you juggle the competing priorities in your own work*? [Relative Priority-RP]*

16. What has your working relationship been like with the team members of the MED-LTC program? *[Networks & Communication – N&C]*

17. Do you feel it would be useful to have regular meeting with those leading the MED-LTC team? If yes, how often and who would attend? [N&C]
    a. What would be helpful to discuss in these meetings? *[N&C]*

18. What incentives are available to help ensure implementation of the Program is successful? [*Organization Incentives and Rewards]*

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PART IV: LEADERSHIP
19. What level of involvement have other leadership members at your facility had so far with the MED-LTC Program*? [Leadership Engagement-LE]* 20. Other than the formal implementation leader of the MED-LTC Program, are there people in your organization likely to champion (go above and beyond what might be expected) the MED-LTC Program? *[Champions]* 21. How have these champions helped with implementation? *[Champions]*

V: PARTICIPANTS
22. In what ways do you think the MED-LTC Program is meeting the needs of LTC residents? *[Patient Need & Resources-PN&R]* a. In what ways do you think the MED-LTC program is meeting the needs of LTC PCPs and/or clinical staff? *[PN&R]* 23. How have residents/families responded to the program? [*PN&R]* a. How have PCPs and/or other clinical staff responded to the program*? [PN&R]* 24. What barriers have residents/clients and their families/substitute decision makers faced when participating in the program? *[PN&R]* 25. What barriers have PCPs and/or other health care clinicians faced when participating in the program? *[PN&R]*

VI: EFFECTIVENESS
26. Has the MED-LTC program been implemented according to plan? Explain**.** *[Executing]* 27. How confident are you that the MED-LTC Program is being successfully implemented? *[Self-efficacy]* 28. What makes you/or not makes you confident? *[Self-efficacy]* 29. How effective do you think the MED-LTC program is? [Knowledge and Beliefs about the Intervention]