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ORIGINAL RESEARCH

Mental health services for Nunavut children and youth: evaluating a telepsychiatry pilot project

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ABSTRACT

Introduction: This study examines the delivery of psychiatric consultation services using videoconferencing technology to health and mental health workers in the Nunavut territory of Canada. The research provides insights into the TeleLink Mental Health Program and the delivery of professional-to-professional program consultations and continuing education seminars.
Methods: Participant observation of 12 program consultations and four continuing education sessions was conducted. Individual interviews were conducted with the consulting psychiatrist and the lead program coordinator in Nunavut. As well, a focus group was held with Nunavut workers who participated in the televideo sessions.
Results: The study found a number of factors that facilitated or hindered the process and content of a consultation-based telepsychiatry program and its effect on building capacity among frontline staff. Four main themes emerged related to the delivery of psychiatric services via televideo: gaining access, ensuring culturally appropriate services, providing relevant continuing education, and offering stable and confidential technology.
Conclusions: Live interactive videoconferencing technology is an innovative and effective way of delivering specialized mental health services to professionals working in remote areas of Nunavut. Study results provide important strategies for expanding this approach to other jurisdictions in Nunavut and other Inuit regions.

Key words: consultation services, Inuit youth, mental health, Nunavut, telepsychiatry.

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Introduction

Inuit communities are the fastest growing and youngest demographic in Canada, with a median age of 22 years, compared with 40 years for non-Aboriginal people[1]. In 2006, 42% of the population in Nunavut were aged 1–19, compared with 24% in the rest of Canada[2]. Given this young and growing population, the health status of Inuit young people is of particular concern. A recent report[2] reveals stark statistics: Inuit youth are five times more likely to die than their counterparts in the rest of Canada; 11 times more likely to die from an injury; 11 times more likely to die from an infectious or parasitic disease, and twice as likely to be killed by a non-communicable one. From 2004 to 2008, the suicide rate among Inuit children and teens was 30 times higher than that of young people in the rest of Canada. Half of all deaths of young people in the region were suicides, compared with approximately 10% in the rest of Canada[2].

The rates of suicide among Inuit youth highlight their precarious mental health status and the need for improved mental health services. However, the question of how best to address the mental health needs of Inuit youth remains unanswered. Access to mental health care is available through medical primary care teams (nurses, family physicians) or social services[3]. For more specialized mental health care, consultation with psychiatrists and other mental health professionals is available[4] from either tertiary care centers in the south or a psychiatrist who visits the region several times per year. However, a review of psychiatric consultation in Canada's north and Inuit populations[4] found that traditional models of psychiatric consultation have 'significant limitations, including assumptions about its validity and usefulness, its segmented approach, and its individual focus' (p. 174).

The use of videoconferencing technology[5] represents an innovative approach to the delivery of specialized mental health care to rural and remote communities. This approach has been endorsed by the Canadian Academy of Child Psychiatry[6] and the Canadian Senate[7], recommending that telepsychiatry be used in rural and remote communities for consultations, education and training of mental health practitioners. The TeleLink Mental Health Program at the Hospital for Sick Children in Toronto offers a comprehensive, collaborative model of care using videoconferencing technology[5]. The program provides consultation services to 15 primary children's mental health agencies in rural Ontario and to organizations that include community hospitals, youth detention centres, youth justice programs, and community physicians. Bilingual services (English and French) include clinical consultation and/or short term follow-up, professional-to-professional consultation, shared care, program consultation, and education and training. The consultative model of care means that ongoing responsibility for the case remains with the referring agency or physician.

In September 2011, the Territory of Nunavut joined with the TeleLink Mental Health Program to deliver psychiatric consultation services to health and mental health workers in Nunavut's three sub-regions – Kitikmeot, Kivalliq and Baffin – using interactive videoconferencing technology. The pilot project was delivered over the course of 8 months, from November 2011 to June 2012, and included two main components: program consultations and continuing education seminars.

The program consultations consisted of 12 sessions of 90 minutes each, delivered twice monthly. A dedicated TeleLink child psychiatrist met with frontline workers (psychiatric nurses, social workers, child and youth workers, community wellness workers) via televideo to discuss clinical, program-wide, and community issues. The format was interactive: each session consisted of case presentations by Nunavut workers to the psychiatrist (and the other sites in attendance) for comment and discussion.

The second component of the program comprised four continuing education seminars, each two hours long. The two seminar topics, each delivered by a different TeleLink

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psychiatrist, were suicide prevention and trauma (two sessions), and substance-induced psychosis (two sessions). (Three different child psychiatrists participated in the TeleLink Mental Health Program: one psychiatrist delivered the 12 program consultations, a second psychiatrist delivered the education sessions on suicide prevention, and a third delivered the education sessions on psychosis.) Each education session began with a formal PowerPoint presentation by the psychiatrist, followed by a question period.

The project's goal was to enhance capacity among Nunavut staff working with young people experiencing mental health and behavioral issues. Specifically, the goal was to enhance capacity in the diagnosis, formulation, and management of mental health problems among Nunavut children and youth, through the delivery of regular professional-to-professional program consultations and continuing education seminars. This study examines the process and content of the TeleLink Mental Health Program from the perspective of participants and presents factors that facilitated and/or challenged the provision of psychiatric consultation services to Nunavut staff.

Methods

An interpretive interactionist framework was used to guide the study[8]. Interpretive interactionism is both a perspective and a method, and seeks to highlight the lived experience of individuals, collected through thick description and personal experience stories. Thick description involves capturing the meaning and experience in a situation in a rich and detailed manner, creating the conditions for interpretation and understanding[8](p. 144). A personal experience story is a narrative, which relates the self of the teller to a significant and personal experience that has already occurred[8](p. 38). Denzin describes this as a method for studying biographical experience through the use of personal experience and self-stories that focus on key turning points in people's lives[8](p. 47). For the interpretive interactionist researcher, a major aim is to grasp the subjective worlds, meanings, and interpretations of the individual positioned within a social context.

Study participants included: Nunavut staff (psychiatric nurses, social workers, child and youth workers, community wellness workers), the TeleLink consulting psychiatrist providing consultation services, and the lead coordinator in Nunavut. Participants spoke English and provided written consent to allow a researcher to observe the program consultations and education seminars, and/or participate in an interview or focus group discussion.

Data collection

Participant observation: The research manager attended all 12 program consultations and four education seminars. Detailed field notes were produced and included participant dialog, non-verbal communication, and descriptions of physical setting. As well, reflexive field notes were kept, including notes relating to issues such as the research process, methodological queries, and interactions with participants. The research manager observed the sessions from the TeleLink site in Toronto.

Individual interviews: Individual interviews, lasting approximately 1 hour, were conducted with the TeleLink consulting psychiatrist (in person) and the lead program coordinator in Nunavut (by telephone). The research manager conducted both interviews.

Focus group: A 90-minute focus group was held via televideo with individuals who received consultation services and/or participated in the education seminars. Four sites participated, with the number of participants ranging from one to five people per site. Of the four sites, one did not participate in the program consultations and another attended only two sessions. All four sites participated in the continuing education seminars. The research manager moderated the focus group from the TeleLink site in Toronto. (Four sites actively participated in the focus group discussion; however, equipment at eight sites was dialed in to participate. It is not possible to know if anyone was in attendance at these

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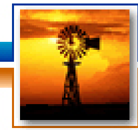

additional four sites. This technological issue is addressed in the results section.)

Data analysis

Analysis of the textual data (field notes, interview and focus group transcripts) was iterative and followed procedures outlined in Denzin's framework[8,9]. The first step of the analytic process is bracketing, followed by construction and contextualization of findings. Bracketing involves repeatedly reading through the transcripts and isolating the recurring features and essential elements under investigation. This process is commonly known as coding. The next step, construction, builds on the bracketing process by arranging essential elements into a pattern. In essence, the process of construction 'classifies, orders, and reassembles the phenomenon back into a coherent whole'[8](p. 58). The final step of the analysis is contextualization, a process in which greater meaning is sought across individual experiences. It starts with the critical themes and structures uncovered during bracketing and construction. According to Denzin, contextualization provides a more thorough understanding of the phenomenon because it is described from the participants' perspectives 'in their terms, in their language, and in their emotions. It reveals how the phenomenon is experienced by ordinary people'[8](p. 60).

The research manager examined the transcripts for themes, and a coding scheme was developed to reflect these themes. The transcripts and notes were then systematically coded using the codebook. Any disagreements were resolved by returning to the original text.

Results

Set-up and delivery

Nunavut participants were excited about the TeleLink Mental Health Program, given the significant gap between the mental health needs of Nunavut's young people and the resources available. One participant indicated, it was 'a gem to find such a resource [for Nunavut]'. In the early stages of program development, the TeleLink Mental Health Program engaged a child psychiatrist at the Hospital for Sick Children to act as a liaison between the hospital's TeleLink Program and Nunavut administrators. This psychiatrist provided fly-in services to the region, and her involvement was seen as a way to bridge communication and build trust between the two sites. The liaison also helped administrators determine how to effectively structure the project's activities. According to one administrator, having a representative known to both sites 'made the difference' because this person was highly regarded by both sites, was well connected, and '100% behind the project'. While instrumental in the initial phases of the project, the liaison was not formally involved after the program consultations began.

The schedule for the consultation and education sessions was determined before the program's launch. All participants reported being satisfied with the dates, time, and length of the sessions. To protect the time slot, Nunavut organizers color-coded the sessions as 'clinical' in the calendar, thereby prioritizing the event and avoiding possible cancellation.

Nunavut administrators selected the sites that would present cases at each bimonthly session. Rotating the opportunity to present cases ensured that everyone had a chance to participate and it offered 'protected time' for the presenting site. Others in attendance would be 'at the table to listen and learn', with an opportunity to ask questions at the end. Initially, it was thought that a more open presentation style would result in too many people participating at once and interruptions during case presentations. As described later, concern regarding protected time was not warranted.

Access and participation

Program participation was open to all Nunavut staff working with young people experiencing mental health and behavioral issues, from health, education, social services, and non-governmental agencies. In all, staff from 25 communities were invited to take part. Fourteen sites from Nunavut's three regions agreed to participate: five sites from Kitikmeot,

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one site from Kivalliq, and eight sites from Baffin (including Iqaluit). On average, five to eight sites attended each session, with typically one or two people at each site; occasionally, a site would have five or six people in attendance.

Results suggest that various factors enhanced participation in the TeleLink Mental Health Program, including:

- advance scheduling: Nunavut administrators scheduled sessions well before program launch and emailed calendar invitations to participants. This ensured availability of televideo facilities and allowed participants to mark their calendars.
- convenient scheduling: Sessions were scheduled at a time when most frontline workers were available.
- management support: Nunavut managers encouraged staff to participate and present cases. To reduce burden, minimal preparation was required.
- support for telehealth: Regional managers in Nunavut encouraged the use of telehealth, as a way to improve communication and bring people together.

A number of factors hindered participation in the program, resulting in limited or non-attendance. They included:

- scheduling conflicts: With the program delivered across three time zones, an ideal time slot was difficult. For some, the selected time conflicted with other events, such as a psychiatrist's clinical visit.
- communication: Despite efforts to promote the program, not all staff were aware of the TeleLink initiative. While communication with regional and community managers was strong, filtering information to individual workers/sites was challenging, particularly to casual and agency staff. Isolation was also a factor, with frontline staff not always included in communication.
- resource shortages: Participants described their regions as being understaffed and stretched for resources; for example, participation meant taking nursing staff away from clinical patient care.
- technology: The lack of a 1-800 (free call) number meant that people out of town could not participate by calling in long distance.

Program consultations

Program consultations were organized around case presentations from Nunavut staff. Participants had the option to present a new case or discuss a previously presented case. Over the 12 sessions a variety of cases were presented, dealing with diverse issues including attention-deficit hyperactivity disorder, anxiety, depression, and psychosis. Across all age ranges, issues of common concern included trauma, neglect, substance use, physical and sexual abuse, bullying, anger management, and attachment disorder.

In the early sessions, data indicate almost everyone was nervous, at both near and far sites. However, field notes reveal increasing comfort over time, as participants learned how to use the psychiatrist's skills and how best to present a case, and as the psychiatrist became familiar with the social and cultural context in Nunavut. Comfort with technology also improved (for example, participants learning to mute their microphone).

Presenting sites were instructed to send the psychiatrist a one-page case summary ahead of their session. This was intended to give structure to the sessions and help the psychiatrist prepare in advance. Initially, there was confusion about what kind of information should be sent, how much, and where. In one early session, a three-page summary was prepared by the worker, prompting the psychiatrist to remind presenters that one page was sufficient. If someone from a designated site(s) was not prepared to present a case, or not in attendance, the psychiatrist opened the floor to other sites, whereby one or two sites would volunteer to present a new case, or follow up on a previous case. On average, a total of two planned or impromptu case presentations were discussed per session.

In instances where no cases were presented, opportunities arose for open discussion of general questions or issues

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related to health/mental health services in Nunavut, such as school-based programs, housing shortages, and the lack of in-patient beds and addiction programs. These sessions produced the most dynamic exchanges across the sites, as noted in the following field note: 'This session had much back and forth, with five sites speaking during the session, sharing information, giving their experiences. It seems that an open session prompts these types of conversations.'

In her interview, the psychiatrist defines 'a good session' as one in which many sites participated and there was an exchange of ideas across sites. Also, sessions in which people were not afraid to ask questions or disagree with the psychiatrist were considered successful, as revealed in the following note: '[The presenter] corrects something that [the psychiatrist] has said. The psychiatrist responds, 'You disagree. Good!'' The psychiatrist encourages dissent from participants and invites challenges to her formulation.

The psychiatrist acknowledged that she would have liked to see more cases presented. Field notes indicate that on several occasions silence would follow the psychiatrist's request for another case presentation. Sites responded to the request with comments such as 'I have lots of cases but I don't have them prepared' or 'I don't have anything prepared, but will bring something next time'. Asked to reflect on this, the psychiatrist offered a number of explanations. First, she suggested it may have been a function of the group process, and that 'more time is needed to build trust and create a safe environment'. Second, participants may have felt that they needed to present the 'perfect' case, with supporting written summaries. Short on time and resources, some may have been discouraged. Third, the psychiatrist sensed a variation in comfort level with the program, or with her as the psychiatrist. Asked to reflect on the number of cases presented, Nunavut participants indicated that the issue was related to staff shortages and clinical demands.

Tension was rare and described by the psychiatrist as 'normative'. Nevertheless, there were instances where discomfort was apparent. In one case, the psychiatrist sensed that the presenting site was looking for a referral to a specialist in the south, a service beyond the scope and mandate of the project. In another case, a manager who was not involved in the TeleLink presentation disagreed with recommendations that deviated from the set plan of care. Analysis suggests that tension could have been reduced if the case manager had been consulted, and more history given during the case presentation.

Capacity building

An important program goal was to build community capacity, by strengthening across-site communication, pooling local knowledge, and fostering a peer supervision model. To this end, the psychiatrist encouraged participants to continue discussions after each session, or distribute information directly with one another. Within session, the psychiatrist encouraged contributions from non-presenting sites (with permission from the presenting sites). The psychiatrist also invited participants to contact her between sessions. When the sites expressed interest in knowing more about a topic, the psychiatrist offered a review of the literature, and followed up by distributing research articles. In return, Nunavut workers sent the psychiatrist information about their communities, including statistics and demographic data.

Evidence of capacity building emerged as the sessions progressed, with case-specific information being generalized to other cases and Nunavut workers helping each other to resolve problems. Field notes following one session recorded this psychiatrist comment, 'I saw lightbulbs go off … The best part is that people are jumping in, offering their opinions and solutions'.

Cultural sensitivity

A concern for the psychiatrist was the level of expertise or specialized knowledge required to work with Inuit communities. Having never been to Nunavut, it was difficult to get 'a sense of the environment, to understand the lived environment' experienced by workers and their clients.

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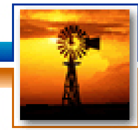

Before the start of the consultations, the psychiatrist conducted research into the region to better understand the communities she would be working with. However, with limited time to 'figure out the needs of the sites', she relied on Nunavut participants to educate her about the situational context of their work. To this end, approaching the sessions with 'humility and not pretending to know everything' was an effective strategy for avoiding stereotypes and assumptions. Field notes revealed a willingness by the psychiatrist to test the feasibility of her recommendations, frequently asking case workers, 'Does that make sense?' or 'Would you agree?'

An equally important strategy for the psychiatrist was communicating her respect for Nunavut staff, and acknowledging their extensive knowledge and professional skills. Repeatedly, the psychiatrist would proclaim her admiration: 'Your job is much harder than my job, flat out. You are writing the book on working and living in a small town' and 'I have nothing but admiration for you guys. You deal with very extreme complex cases … You do remarkable work'. More subtle strategies also emerged, including sharing personal stories, using self-deprecating humor, and regularly checking Nunavut's weather on her cell phone.

Upon reflection, the psychiatrist found that a general knowledge of psychiatry was sufficient to deal with presented cases and that her recommendations were 'standard' in psychiatry. However, the psychiatrist noted that an important caveat to this was understanding the lack of resources in Nunavut and the 'need for creative and context driven recommendations'. For example, while standard psychiatric practice was sufficient for the diagnosis or clinical formulation of a presenting problem, treatment options required knowledge of Nunavut's unique social, cultural, and geographic situation. As noted above, a number of strategies were used to work cross-culturally and facilitate relevant treatment options. There was unanimous agreement among participants that reciprocal site visits would have been helpful in this regard. Focus group participants noted, 'We didn't have time to just talk about who we are, the conditions we work under'. Nevertheless, participants felt the psychiatrist did well in understanding their communities and 'the social piece'.

Education seminars

Four education seminars, each 2 hours long, were delivered following the program consultations. The topics, timing and modality of the presentations were selected in consultation with Nunavut's lead coordinator and based on clinical practice needs. The two topics, each delivered by a different TeleLink psychiatrist, were suicide prevention and trauma (two sessions) and substance-induced psychosis (two sessions). The education seminars were well attended, averaging 12 sites per session. The number of participants per site was not recorded.

One seminar leader described the participants as a 'mixed group', varying in both knowledge of the topic and professional experience in dealing with children's mental health issues. For some attendees, the first seminar was 'not as useful' because the information covered repeated an existing workshop offered in Nunavut. However, the topic was considered timely, due to the high number of suicides being experienced in some communities. The second topic was considered more appropriate and helpful.

The information presented was described as useful; however, participants would have preferred a focus on Canadian or, more precisely, Nunavut statistics. Some stated they would have liked less statistics and more practical strategies. Participants described the seminar leaders as knowledgeable, engaging, friendly, and willing to tailor presentations to their needs/questions. However, a focus group participant indicated that one presenter 'didn't get what it is like to live here'. Presentation styles were described as clear and concise, but also, at times rambling and unstructured. There was a desire for more time at the end of the presentations for discussion, and a request that handouts be available beforehand.

Technology

The televideo technology was regarded as an effective tool for learning and education. The psychiatrist reported a high level of comfort with the technology, and noted varying skill among Nunavut participants in handling the equipment. In

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the focus group, Nunavut participants indicated 'sufficient comfort' with the technology, though room set-up was considered 'not always ideal'.

While the technology was considered 'good', participants felt it 'could have been better'. Technical difficulties occurred with varying severity throughout the program's run. A particular frustration among participants was the audio delay that is typical in televideo transmissions, resulting in confusing over-talk between speakers. Visual problems included grainy, choppy, and unclear pictures, dark lighting that made seeing facial expressions difficult, as well as intermittent freezing or pixelation of the picture. In other cases, certain sites could only hear the audio without a picture. Program delivery was also affected when difficulty establishing a connection resulted in several late starts. In her interview, the psychiatrist acknowledges these difficulties, stating that audio and video quality made communication difficult. The audio delay in particular hindered the 'ability to have a conversation'.

A feature of the technology, in which the connection would automatically disconnect at the end of a session (after a 5-minute warning), posed both challenges and benefits. If running long, a session would be abruptly terminated, without the option to extend the session. A benefit of this feature was that it kept the sessions to the allotted time, thereby 'containing the service, making it cleaner', and avoiding the 'risk of burn-out'. Another feature of the technology was an inability to see all the sites signed into a particular session, and only the presenting site viewable on screen. The psychiatrist noted that it would have been helpful to see all the sites, and how they were responding to the sessions.

Confidentiality

An important challenge to emerge regarding the use of technology was the issue of confidentiality. With the level of detail provided in case presentations and the small size of communities, there was the risk that those listening in might be able to identify the clients or their families. There was also a risk that the clients discussed may be related to or be friends of the Nunavut workers. As such, confidentiality was discussed at the inaugural session, with presenters asked to use pseudonyms when discussing cases and to refer only to the larger region from which a case was drawn rather than to the community. As the sessions got under way, it was apparent that enacting these strategies was difficult: presenters would forget to use pseudonyms and the community name automatically appeared at the bottom of the video screen.

Two other examples illustrate the issue of confidentiality. In one session, Nunavut staff attempted to maintain patient confidentiality by presenting a 'hypothetical case' but struggled to present enough information without revealing identifying information. The psychiatrist reassured them, stating, 'You don't have to give me all the details of a case, they can be general details, or a feeling'. In the end, the presenters found the process helpful: 'This is extremely helpful. We will follow through … We are sorry we could not give more details'.

A second example relates to the uncertainly about who might be listening in on a session, and the limitation this placed on having an open discussion of sensitive issues. In one session, it becomes apparent that a participant from another site may have information pertinent to a case. However, when the psychiatrist asks, 'Do you have a perspective you can add [to this case]?' the participant responds, 'Not in this forum'.

Field note and focus group data reveal concern that confidentiality issues might be responsible for the dearth of case presentations. One focus group participant acknowledged that confidentiality was a concern and contributed to her reluctance to use the TeleLink service. For this person, the telephone was a more secure method for client support services. Program administrators indicated if the program were to be accessed by a greater number of communities in Nunavut, the issue of confidentiality would have to be more rigorously addressed.

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Overall satisfaction

Overall, reaction from Nunavut participants to the TeleLink Mental Health Program was very positive. Field notes as well as interview and focus group data reveal the following reactions:

> *Very helpful; this case was more of an emergent crisis than I thought. I feel more comfortable going forward.*

> *We work in isolation. It pulls your heart out.* [It is] *good when we talk with a person like you, we can go* [forward] *with more confidence.*

> *Thank you for the sessions. Very educational.* [This participant also thanked colleagues:] *Overall, to sit, listen and share. That is marvelous. I see tremendous strengths.*

For more experienced participants, the sessions were a 'refresher' that 'supported what I know rather than offering something new'. However, even for experienced workers, the program offered new ways to think about the knowledge they have and new ways to apply that knowledge. It also offered information unavailable to them: 'the psychiatrist has up-to-date information on new drugs'. Most importantly, it was appreciated that the psychiatrist brought a psychosocial approach to her consultations. One participant was 'surprised and impressed' with this approach, indicating that a multidisciplinary approach was needed to tackle children's mental health problems in Nunavut and that 'prescribing a pill will not be effective when the environment needs fixing'.

Discussion

The use of televideo technology to deliver psychiatric consultation services to rural and remote communities is considered an efficient, cost-effective[10-13] and user-friendly approach[14]. However, the mental health problems confronting children and youth living in Nunavut present special challenges that require mental health professionals to realign their approach and assumptions regarding psychiatric consultations[15].

As such, it is important to understand what factors may facilitate or hinder a televideo psychiatric consultation service and its effect on building capacity among frontline staff in the diagnosis, formulation, and management of mental health problems among Nunavut young people. The main factors contributing to the success of the TeleLink Mental Health Program identified in this study include gaining access, enhancing the participant experience, delivering continuing education, and ensuring stable and confidential technology. These factors, discussed below, provide important strategies for moving forward and expanding this approach to other jurisdictions in Nunavut and Inuit regions.

Gaining access

Gaining access and securing support from Nunavut administrators and frontline workers was an important factor in the successful delivery of TeleLink consultation services. As reported elsewhere[4], psychiatric consulting services are more likely to be effective when informed by local values and practices, and based on the needs and experiences of participants[16]. Territorial and regional managers were actively involved in the planning and design of the TeleLink program, ensuring that the program was actively promoted within the region and that necessary resources were available. For example, the decision by Nunavut administrators to code the TeleLink sessions as 'clinical' ensured that the sessions would be prioritized and not 'bumped' from the schedule. Though seemingly a minor detail, it illustrates how gaining local support and cooperation can facilitate implementation and access. A question for future research is the feasibility of coding similar consultation services as clinical in the longer term.

Employing a liaison familiar to both north and south decision-makers was also instrumental in bridging communication and establishing trust. However, the liaison was formally involved only in the initial phases of the project. The results suggest that establishing a more formal ongoing role for this type of

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person would be beneficial and is recommended for future consultation services. Once the program was under way, communication with Nunavut managers continued, but shifted mainly to the consulting psychiatrist. While the decrease in communication between decision-makers did not impede service delivery, keeping this channel of communication open throughout program delivery would allow for continuous feedback and help identify issues early.

While communication among administrators working in Nunavut was well established, it was less effective in getting information out to frontline workers. To improve communication, suggestions include strengthening the link between telehealth coordinators, regional managers, and frontline workers. Ensuring contact information is up to date is critical, as is confirming that information is being distributed down the line. To this end, assigning a dedicated person to ensure message penetration and address access barriers would be helpful. Other recommendations to improve access for frontline workers include mandating program participation and/or providing additional funds/resources for local agencies to facilitate participation.

Good communication at the community level would also help promote engagement with and participation in the program. Study results reveal that some Nunavut workers did not always use the program as expected, for example not taking the opportunity to present a case, or seeking a specialist referral in the south. As such, program utilization could be enhanced by allowing more time at the start of the program for TeleLink psychiatrists and Nunavut workers to get to know one another, thereby building comfort with the consultation process and creating a safe environment for sharing information. Widening the program's objectives by providing a mechanism for referrals through the consultation process may also help support the needs of northern communities. Finally, utilization could be improved by diversifying session agendas and relaxing preparatory paperwork. The expectation that sites 'listen and learn' when not scheduled to present a case may have deterred attendance. Also, as noted by the TeleLink psychiatrist, advance summaries were not necessary for a successful case presentation. The productive use of session time without case presentations suggests modifying session agendas to include time for impromptu discussions.

Finally, TeleLink administrators need to address issues related to confidentiality, anonymity, and privacy for community engagement and participation to be maximized. Further research is needed to better understand the problem and find suitable solutions. Results from this study suggest a number of recommendations, such as ensuring community names are not revealed on screen, having a neutral party present cases for discussion, and offering frontline staff the opportunity to consult with the psychiatrist privately, without other sites in attendance.

Enhancing the participant experience

While videoconferencing technology is advocated as an innovative solution to the growing shortage of child psychiatrists in Canada and elsewhere[7], research suggests that resistance from professionals may constrain the growth and advancement of telemedicine programs[17,18]. Although the majority of participants reported being comfortable presenting cases via televideo, results suggest that more can be done to improve participant experiences and comfort levels.

Providing the psychiatrist with support and information before the start of her consultation sessions would have eased initial uncertainties. An orientation package on Nunavut including demographic data and health statistics, as well as geographic, cultural and social characteristics, would have been useful. As well, a list of possible participants and communities would have assisted the psychiatrist in getting to know the participants and anticipate attendance; providing Nunavut participants with biographical information and photographs of the psychiatric consultants would also be helpful. Given a lack of personal experience with northern communities, connecting the psychiatrist with a 'mentor' with prior experience in Nunavut or assigning a Nunavut 'co-leader' would have provided important insight and helped bridge the gap.

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Also critical for effective cross-cultural consultations is an understanding of the social, cultural, and systemic context in which clinical problems exist[4,15,19]. Arranging for the consulting psychiatrist to meet Nunavut participants before the program's launch, either through site visits or teleconference, would allow participants the opportunity to share the social and cultural characteristics of their communities and discuss their clinical experiences. It would also help to demystify psychiatry and normalize the psychiatrist's relationship with frontline workers. Relationships could also be strengthened by introducing the education leaders earlier in the process (the education seminars were held at the end of the program consultations; the two education leaders were not known to the sites), and inviting the regular consulting psychiatrist to present or co-present the education seminars.

A final strategy for enhancing participant experiences includes providing scheduled time for socializing, before or after the clinical presentations. Research shows that networking among professions via videoconferencing helps foster communities of practice, which supports skill sharing amongst participants[20]. Providing space for peer-to-peer interaction and allowing workers to 'communicate for ten minutes and put faces to names' can reduce professional isolation and strengthen relationships across communities. As such, informal cross-site conversations should be planned for and built into the consultation schedule.

Delivering continuing education

Research shows that practitioners in rural areas lack access to continuing education opportunities[21], which contributes to professional isolation and impedes recruitment and retention efforts[21-23]. Videoconferencing is considered an effective mode of delivering continuing education[5] and evidence supports a high degree of participant satisfaction, gains in knowledge, and evidence of practice changes[21,24]. Also, technology-based learning brings together rural providers from across a region, reducing feelings of isolation[25].

The education seminars were appreciated and useful to Nunavut participants, particularly when the material focused on clinical matters and practical treatment strategies. Paying attention to and respecting culturally influenced differences can lead to increased understanding and more meaningful interventions. Listening openly to the participants' culturally based needs[4] and delivering culturally adapted services[26] are essential in delivering effective services.

There was concern that the education seminars were repetitive for more experienced professionals and duplicated resources already available. As such, the education seminars would benefit from a more comprehensive needs assessment, involving managers and frontline staff. Studies show that continuing education based on a collaborative assessment of need is more effective in changing behavior and improving patient outcomes[27].

A final strategy for enhancing continuing education seminars is to embed them into the regular consultation sessions rather than presenting them as discrete events. This would allow continuing education to avoid duplication, promptly respond to crisis situations, and address topics that emerge from case presentations and merit in-depth exploration. These strategies would facilitate the uptake of knowledge, by making the continuing education more experientially based, and thus more relevant.

Ensuring stable and confidential technology

This study and others[22,28] indicate that improving technology, equipment, and training can facilitate the uptake of telemedicine. Uptake can also be improved by providing participants with administrative support[29] and user-friendly technology[30]. As well, research shows that problems related to audiovisual quality are drawbacks to using telepsychiatry services[31] and more needs to be done to improve infrastructure facilities[17]. This result is supported by others[18] who identify the lack of time and money as significant barriers to telemedicine use.

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Technology and its ability to provide confidential consultation services is an important feature of telepsychiatry. According to Auclair and Sappa[3], individuals may be more comfortable discussing sensitive topics with a stranger or a third party external to the community. For the TeleLink psychiatrist, being an outsider and unaware of local politics was beneficial to the consultation process.

However, the challenges in maintaining anonymity and confidentiality in remote communities can be significantly different from those found in more populated settings. We know that rural and remote communities are especially vulnerable to stigmatization resulting from mental health problems[32] and could contribute to the reluctance of some people to access mental health services[33]. While study participants found televideo technology an effective model for delivering psychiatric services to Nunavut communities, confidentiality was clearly identified as a concern. The extent to which such concerns limited program participation is not known and warrants further study. Moreover, if the program is expanded to other communities in Nunavut, TeleLink administrators need to resolve issues related to privacy, confidentiality, and anonymity, particularly.

Conclusions

Research suggests that mental health professionals at near and far sites need to adjust traditional approaches to psychiatry and the consultation process when delivering services to Inuit communities[15]. Critiques of psychiatric consultation to Canada's north describe such consultations as limited due to concerns about validity, usefulness, and relevance[4]. Innovative programs are needed to bridge the gap between the mental health needs of Nunavut's young people and resources available. This study suggests that videoconferencing technology is an effective way of delivering psychiatric consultation services to remote communities such as Nunavut. The project's focus on fostering a peer supervision model, pooling local knowledge, and strengthening across-site communication ensured services were relevant and useful to Nunavut participants. Research suggests that the TeleLink Mental Health Program contributes to capacity building and increases practitioner knowledge and skill[5]. It also provides valuable information related to advocating for improved community-based services, and directing mental health workers to resources previously unknown to them. Furthermore, educational activities between north and south mental health professionals contribute to longer term development of mental health services for Inuit communities[4].

The TeleLink Mental Health Program was a pilot project with limited duration and scope. To broaden its reach, the authors recommend that future programming expand participation to include other service providers in Nunavut, such as social services. Future research should also study the role of the psychiatric consultant and how different consultants may influence program delivery and outcomes. Follow-up research is recommended to determine the feasibility and impact of the psychiatric recommendations, as well as long-term outcomes from the TeleLink Mental Health Program consultations. Of particular interest would be exploration of the experiences of Nunavut frontline staff in a more in-depth manner and include the experiences of children and youth receiving their services following participation in the TeleLink Mental Health Program.

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