

# Experiences of Telemental Health Providers and Support Staff Serving Indigenous Patients of Northern Canada

Zhida Shang (✉ [zhida.shang@Mail.mcgill.ca](mailto:zhida.shang@Mail.mcgill.ca))

McGill University <https://orcid.org/0000-0002-8979-8025>

**Antonia Arnaert**

McGill University

**Yvonne Hindle**

Centre integre universitaire de sante et de services sociaux de l'ouest-de-l'ile-de-Montreal

**Zoumanan Debe**

Centre integre universitaire de sante et de services sociaux de l'ouest-l'ile-de-Montreal

**Geneviève Côté-Leblanc**

Centre integre universitaire de sante et de services sociaux de l'Estrie Centre hospitalier universitaire de l'ouest-de-l'ile-de-Montreal

**Amine Saadi**

Centre integre universitaire de sante et de services sociaux de l'Estrie Centre hospitalier universitaire de l'ouest-de-l'ile-de-Montreal

---

## Research article

**Keywords:** Telemental Health, Telepsychiatry, Indigenous Mental Health, Telehealth, Telemedicine

**Posted Date:** June 24th, 2020

**DOI:** <https://doi.org/10.21203/rs.3.rs-36224/v1>

**License:** © ⓘ This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

---

**Version of Record:** A version of this preprint was published on January 23rd, 2021. See the published version at <https://doi.org/10.1186/s12913-021-06072-5>.

# Abstract

**Background:** It is known that there is a high mental health burden among Indigenous communities in Northern Quebec. The use of telemental health (TMH) may be a potential solution in addressing this burden, but its use in the Northern Quebec context has never been studied.

**Methods:** A purposive sample of eight healthcare providers and support staff comprising of an entire TMH clinic serving Indigenous patients in Northern Quebec was recruited. A qualitative descriptive approach was adopted, and semi-structured interviews were conducted, concurrent with thematic data analysis.

**Results:** Overall, the TMH staff have a very strong sense of communication, which allows them to diligently serve the Indigenous communities, and reflect upon their own practice. On the other hand, Northern patient care at the inpatient unit is seen as a work in progress, as there exists further potential for culturally sensitive Indigenous patient care. Both the TMH clinic and the inpatient unit address the mental health gap in Northern Quebec, where local staff turnover is adversely affecting patient care. As for the delivery of the mental health care, the in-person and videoconferencing consultations have a synergistic effect, since they allow for the TMH psychiatrists to maintain both an insider and outsider identity. Finally, a comprehensive electronic medical record and further administrative reforms are desperately needed, which would increase the efficiency of all components of the TMH clinic.

**Conclusions:** TMH is an indispensable component of Northern patient care, but there is room for further improvements, especially with regards to the inpatient unit and documentation methods. This study may have implications towards the development and improvement of telemental health in Northern Quebec.

## Background

Indigenous peoples around the globe are resilient, and their identity and culture are a fundamental source of strength; yet, the persistent high incidence of mental health illness and problems within this population are troubling and may be attributed to the historical cultural oppression and the continuous social, political and environmental challenges (1). Besides the difficulties associated with geographical remoteness (2), these communities are confronted with a high turnover and a lack of qualified mental healthcare providers (3, 4). To improve access and support local mental health frontline workers, the Canadian government, in collaboration with First Nations and Inuit health boards, have made available alternative service models through outreach strategies: 1) itinerant psychiatrists who make periodic short visits to the Northern communities, and 2) real-time videoconferencing based telepsychiatry (5).

The term telemental health (TMH), which will be used in this paper, is a broader term that incorporates the provision of mental health services from a wider range of professionals and support staff (6). Most of the studies done in TMH are quantitative with a comparably fewer qualitative studies (7); which tend to focus on understanding patients' experiences and those of psychiatrists and allied healthcare providers such as primary care and emergency room clinicians and therapists (8–13). However, there is a scarcity of

information around the functioning of a comprehensive TMH team and more specifically on the experiences of support staff involved in the provision of TMH services. To our knowledge, no qualitative study has explored the experiences of both psychiatrists and support staff working in a TMH clinic that is mandated to provide hybrid services to Indigenous peoples in Northern Quebec, Canada; which is the purpose of this study.

Evidence exists that TMH is an effective care modality to provide mental health services for children and adults, with equivalent treatment outcomes to in-person care across a range of mental health disorders and patient populations (14). Although patients and clinicians are largely satisfied with TMH as it improves access to care (15), reduces wait and travel times and costs (16), clinicians report a combination of system, policy and administrative concerns and are often seen as the clinical gatekeepers for implementation and sustainability of these services (9, 17, 18).

Despite advances in videoconferencing software programs, technical issues appear to be the most prevalent (19), and providers have noted video, audio and latency issues, and an inflexible video camera as barriers to patient care (17, 20–23). For example, providers are often troubled if a technical issue occurs when a patient is discussing an emotional and sensitive topic (21), and have difficulty not accidentally interrupting the patient during audio lags (22). Relatedly, technical issues may prevent providers from seeing facial expressions, tics and tremors (17), which may inherently translate in a decreased sense of therapeutic alliance building (10, 15, 22) and TMH being perceived as impersonal (15, 22). One study (24) indicates that there are some patient drawbacks using TMH, including less patient engagement, challenges sharing information within the care team and greater inefficiency. As for patient suitability for TMH, providers' opinions are mixed. One study (20) indicates that all mental health patients can be treated via TMH, and identifies patients with anger management issues and agoraphobia as those who best respond to TMH. In addition, psychiatrists believe that shy or socially anxious patients may be well treated through TMH (23, 24). Conversely, evidence exists that seniors and patients who are emotionally unstable, impulsive or have poor coping skills, and those suffering from dementia, paranoia or have visual and/or hearing difficulties are not suitable for TMH (10, 15).

Hybrid service models, defined as the combination of in-person and TMH interventions for diagnosis, therapy and monitoring, may synergistically combine the advantages of both modalities, while minimizing the disadvantages, suggesting that using the strengths of both approaches may enhance patient experiences and quality of care (25). In addition, findings indicate that this model may address the current objections, valid or not, towards TMH services, be more effective than usual care, and should become the new standard of care in psychiatry (26). One study (27) suggests that this hybrid model may reduce the initial time to treatment by seven days. Indeed, in-person consultations may be cumbersome from the provider's viewpoint; depending on the location of the clinic, psychiatrists believe that patients may often need to drive for several hours in often hazardous conditions for the in-person consultations (17), and which leads to some studies instead recommending only the initial consultation to be in-person (15).

Unquestionably, the provision of culturally appropriate care is key to treatment and outcomes and is as relevant via TMH as during in-person consultations. However, when providing TMH services, the probability of cultural differences and divide occurring between patient and provider may be heightened (28), mainly to geographical distance but as well the familiarity with technology and the ability to provide linguistically and culturally sensitive care (29). Receiving TMH services from providers who speak patients' mother tongue, without the need for interpreters, enhances the quality of the therapeutic relationship and confidentiality, and reduces the loss of nuances of verbal communication (30). For example, in one study on Korean immigrants (31), it is shown that patients are more open to discuss their concerns if the telepsychiatrist is of the same culture. As for the use of TMH in the Indigenous Canadian context, researchers have found that cultural rapport can be built, albeit with some difficulty (15, 24). To further strengthen this rapport, researchers (24, 32) recommend providers to visit the Indigenous communities, in order to have a sense of the local environment and the historical, cultural and social context of their patients.

## Methods

### Context

Since 2007, the TMH clinic, part of a university-affiliated psychiatric hospital, is mandated by the Quebec government to provide remote clinical consultations to adult patients from various Cree and Inuit communities. Occasionally, the service is also used for medical education, family meetings, legal and administrative tasks. The four psychiatrists working in the clinic provide TMH services through videoconferencing and travel one week per month to a Northern community to provide in-person care, with two psychiatrists responsible for Inuit communities, while the other two are dedicated to Cree communities. As for the clinical consultations themselves, the psychiatrists have according to their individual schedules, the flexibility to start and end the videoconferencing, through a software program called Cisco Jabber installed on their desktop computers.

Patients in the Northern communities, however, need to access a room with fixed videoconferencing equipment at a local clinic. The support staff, consisting of a manager, two liaison nurses and a clinical secretary, are responsible for the logistical organization of the TMH services. More specifically, the liaison nurses work with the inpatient staff caring for hospitalized Indigenous patients, relay patient information to the TMH staff, participate in inpatient rounds, arrange family meetings through videoconferencing, and are responsible for discharge planning. The clinical secretary is solely involved in administrative work, with no direct patient care responsibilities. Duties of the clinical secretary include scheduling the psychiatrists' videoconferencing consultations, receptionist tasks and coordinating medical documentation, either by sending medical notes to the Northern clinic, or requesting medical notes from the Northern clinic. The manager oversees the work of all TMH staff, organizes weekly patient care rounds specific to the TMH clinic and communicates any concerns or questions to the higher hospital management.

## Participants and Procedure

A qualitative descriptive design was used. After receiving ethical approval from the Mental Health University Institute Research Ethics Board in 2019, a purposive sample of six females and two male participants, representing four psychiatrists and four support staff at the TMH clinic were recruited. A recruitment flyer was disseminated, and the study was presented during their weekly staff meetings. The sole inclusion criterion for participant was employment at the TMH clinic. Written consent was obtained prior to the one-time semi-structured interview, and a sociodemographic form was filled, which gathered age, years of practice, duration of employment at the TMH clinic, education level, and percentage of work time dedicated to TMH. The interviews were conducted in English via videoconferencing (ZOOM) by the first and second authors at a time convenient for the participant and lasted approximately 60-75 minutes. The interview guide included questions such as, *tell me about your role within the TMH clinic. Can you explain how a TMH consultation is organized? In your opinion, what are the challenges you currently encounter when organizing and delivering a TMH videoconferencing consultation? What is your experience communicating with local frontline workers in the Northern communities? In your opinion, what are your recommendations to improve the TMH services?* In order to ensure alignment between the study aim and the interview questions, the guide was pilot-tested and validated with key informants, and further refinements were made after the first few interviews (33).

## Analysis

# Results

## Analysis

The lack of mental health services and the high turnover rate of existing mental healthcare providers within Northern communities remain an area of concern, which is illustrated by the theme *Vacuum of Mental Healthcare in Northern Communities*. The gap in local services led to the mandate of the TMH psychiatrists to offer in-person consults in the community and/or through videoconferencing; however they viewed TMH as a mode to provide supplemental care and perceived both services, in-person and videoconferencing, as having a synergistic effect on patient care; reflected through the theme *Synergistic Effect of Videoconferencing and In-Person Care*. Despite recent videoconferencing upgrades, TMH psychiatrists still face technical setbacks because of outdated desktop computers and inherent Internet connectivity issues. If warranted by the clinical situation, a patient may be admitted by a TMH psychiatrist and a local general practitioner (GP) to the university-affiliated psychiatric hospital. This hospitalization may create a new set of information sharing and communication challenges between inpatient unit and TMH staff; leading to the theme *Variation of Care between Inpatient and TMH Staff*. Overall TMH staff express a strong sense of collegiality and team cohesion in order to address their mandate with the upmost commitment; construed by the theme *Positive Collegial TMH Working Environment*. Despite all efforts to provide high-quality TMH services, all participants express a sense of frustration with the paper-based system and its scattered methods of documentation. The *Need for*

*Digital Transformation*, as the final theme, highlights the necessity of adopting an electronic medical record (EMR) that is accessible to TMH staff and local providers within the communities, and will lead to administrative reform. As different TMH staff have different responsibilities and expertise, the first two themes primarily reflect the experiences of the psychiatrists, the third theme describes the voice of the psychiatrists and liaison nurses and the fourth theme and fifth theme reflect the views of all participants.

### **Vacuum of Mental Healthcare in Northern Communities**

The need for local Northern mental health services is an issue raised by three psychiatrists; whereby two psychiatrists indicate being happy to see their diminished role in return for further local mental health services, as one explains: “I hope they will have their own psychologists and psychiatrists, so they won't need me. And I am going to be there until I am more detrimental to them and then I will leave”. This lack of services is intensified by the shortage of Northern staff, such as nurses, general practitioners (GPs), social and community workers, and is further aggravated by the high turnover rates that is so common up North. The turnover rate of GPs is noted by a liaison nurse, calling GPs “convenience stores, since they are going in and out, up North then coming back down South”. The nurse further explains how it was often difficult to get in touch with the GPs and that they occasionally inquire about issues that clinicians with experience in mental health should know. However, this knowledge concern is not shared by any other participant, with one psychiatrist downplaying the turnover of GPs, stating that they stay in the community for an average of three to four years. Another psychiatrist noted that some GPs have been up North for over 20 years and are fluent in Cree or Inuktitut.

Besides GPs, the lack and turnover of community workers and social workers are of concern to a liaison nurse and two psychiatrists, with one physician giving an example: “We had somebody with borderline personality disorder receiving therapy from the social worker, and of course the social worker went on vacation, and it was a crisis”. Another psychiatrist expressed that more patients don't show up for their TMH appointments when the community worker is missing. Overall, working with the Northern staff is an appreciated experience for all the TMH psychiatrists, and a delicate experience for one, describing their unique concerns: “I need to be careful of what I am saying because I can re-trigger traumas in those social workers I'm working with”.

### **Synergistic Effect of Videoconferencing and In-Person Care**

To begin, all psychiatrists believe in the necessity of regular in-person consultations up North and that videoconferencing cannot fully replace the in-person consultations. All psychiatrists state that they enjoyed the in-person consultations, and they have identified various broad advantages, such as the ability to better discuss sensitive issues, build the therapeutic alliance, review the chart in-person and collaborate with the Northern teams. One psychiatrist highlights the benefits of videoconferencing: “We are talking about sensitive issues like trauma and suicide, so people want to know that the person they are talking to is a person, not someone on a screen”. Relatedly, three psychiatrists state the necessity of having a first contact with the patients in-person, unless it is an emergency first evaluation, with one psychiatrist explaining that it is better for alliance building. Additionally, two psychiatrists believe that the

Northern staff hold videoconferencing in high regard, with one giving an example: “When I am up there, they make sure there is no no-shows, with staff going to the person's house and finding them on Facebook to bring them in”.

Naturally, the in-person consultations allow the psychiatrists to develop an “insider” role, which enables them to gain a deeper understanding of the Indigenous culture and local community life. All psychiatrists embrace the insider role that they adopt, and state various methods of becoming immersed in the community, such as: participation in sweat lodges and feasts, living in proximity with the community and having casual conversations with community members. This can be summarized by one psychiatrist: “The reality of living in these Northern communities is very different than living in the city, and you have to go and see how things function, which our patients appreciate us knowing”. This insider role is important, and the in-person consultations are so enjoyable that one psychiatrist even regrets that they are unable to celebrate with the community during national holidays, such as Christmas. Another psychiatrist believes that this insider role allows them to develop longitudinal relationships with their patients, explaining that: “I am lucky to go up one week per month, since the more I can see them, the more I can be there as a mirror, just trying to make them aware of what is happening. After ten years the kids that I am caring for become adults, and that their kids are followed also by me now”. Overall, all psychiatrists believe that this insider role is a demonstration of allyship, an act that is necessary for the mental health care of Indigenous peoples.

On the other hand, all psychiatrists also believe in the necessity of videoconferencing. The primary benefit of videoconferencing for the psychiatrists is the ability to see more patients. Additionally, another psychiatrist takes advantage of the videoconference to meet with Northern staff before or after the patient encounter. However, for all psychiatrists, videoconferencing is one method for them to maintain a concurrent “outsider” identity. This outsider identity is one that is necessary for the field of mental health, as it allows the patients to disclose sensitive information without fear of it leaking out to the community. Therefore, the psychiatrists engage in their insider role to become involved with the community but cannot become too involved or else the patients will be uncomfortable disclosing sensitive information. One psychiatrist summarizes the outsider role as: “People appreciate that I am not from the community, so there is no concern that after my day I am going to get drunk and talk about my clients”. Another psychiatrist explains patients’ perceptions: “Patients feel more comfortable opening up about difficult things because they know that even though we are there recurrently, we are not part of all of those gatherings. That we are able to listen and take the plane and fly away and not gossip or share”. This inherent and complex balance between the two roles during their in-person consultations is a task that the psychiatrists must continuously manage. In a sense, the outsider role is maintained by the videoconferencing, however it is not solely about it, as it can also be maintained by simply not being a permanent member of the community.

As for the videoconference itself, there are still technical limitations. The primary technological issue identified by three psychiatrists is the fact that their desktop computers are outdated. This reduces the speed at which they can run the videoconferencing software, and subsequently a reduction in the

efficiency of their TMH services. In addition, there are video, audio and latency issues currently being faced by two psychiatrists, with one of them elaborating: “When I say something, there is one second delay, so there are interruptions, and it is problematic for the timing of therapeutic interventions”. These technological issues are noted by the manager, who comments: “We need money to purchase new equipment, like a portable computer or desktop, in order to have good quality videoconferences, with assessments, follow ups, team meetings, whatever. And I think being told that we have to wait for new equipment until the old one’s die doesn’t work”. Despite these persisting technological issues, there has been gradual improvement over the years, and two psychiatrists noted that the current TMH system is immensely superior to the old fixed-videoconferencing system, where the psychiatrists had to compete for a single, overly large videoconferencing room.

Due to these inherent technological issues, psychiatrists believe that there is a varying acceptability of the videoconferencing technology amongst patient populations and age groups. In general, three psychiatrists identify younger Indigenous peoples as more acceptive towards the videoconferencing technology, compared to older patients, who often are hard of hearing, present with an English language barrier and have less technological literacy. As a result, one psychiatrist noted that their consultations with elderly patients may take a longer time. Interestingly, one psychiatrist remains hopeful for the new generation, explaining: “I feel the new generation really wants to break the vicious cycle and all of that trauma they went through. They really want to protect their kids, and I see more of the change now in the last few years”. Relatedly, another psychiatrist believes that there is a varying acceptability amongst certain mental health conditions, as videoconferencing may be more suitable for patients with depression and anxiety, rather than acute conditions such as psychosis. The psychiatrist further elaborates: “If there is a patient who has a psychotic illness, and there is somebody within the camera, it can tap into the delusional story”.

### **Variation of Care between Inpatient and TMH Staff**

In the case of a serious clinical presentation, Indigenous patients must be hospitalized in the university-affiliated psychiatric hospital. When the patients are flown down South and admitted, the TMH psychiatrists, with their knowledge on Indigenous mental health, serve in a consultant role in support of the inpatient unit psychiatrists, which is seen by a TMH psychiatrist and liaison nurse as a more backpedalled role. This role may also create some confusion for the admitted patients, as one psychiatrist finds it troubling that patients must go through a variety of different psychiatrists as their mental health provider.

One of the main differences between the TMH and inpatient psychiatrists is about medication doses, as two TMH psychiatrists prefer to prescribe a lower dosage. One TMH psychiatrist feels especially uneasy about the large amount of discharge prescriptions written by the inpatient psychiatrists, reasoning that: “I prescribe less medication, because if the patients don't want to take it, they are not going to take it”. For this issue, the TMH psychiatrist recommends the initiation of once-monthly injections at the local Northern clinic as an alternative, since “patients don't have to be seen taking drugs at home, which can

often be overcrowded, so they feel less stigma". In addition to the medication doses, two liaison nurses and three TMH psychiatrists have a different cultural care approach towards the admitted patients. Besides one case of an inpatient staff member making inappropriate comments, the liaison nurses and psychiatrists believe that their experience in working with Indigenous patients is what makes them different from the inpatient staff. Naturally, all the mentioned participants believe in the importance of communicating with and teaching the inpatient staff, with one TMH psychiatrist concluding that: "With some experience in being more diplomatic, I now think our colleagues are pretty open to listening to us". Yet, there are limits to the role that TMH staff can play, as the same psychiatrist said: "I can suggest things, but if they have a different opinion, I guess I can't really do much about that".

Although the liaison nurses engage in teaching the inpatient staff, they also play a more direct patient care role within the inpatient unit, in stark contrast to the TMH psychiatrists. The liaison nurses primarily serve as a conduit of information between the TMH clinic and the inpatient unit, assist the inpatient staff in working with the hospitalized patients and provide family meetings using the videoconferencing technology, with their efforts being noted by one TMH psychiatrist: "The hospitalized patients don't talk that much to non-Indigenous and they feel it is like another world. But luckily we have the liaison nurses who go every day and makes sure patients can connect to the family with telehealth". In addition, the liaison nurses are experts in cultural care, with one describing the use of humor and open-ended questions as techniques in culturally safe care. One liaison nurse who places particular importance in their care for re-admitted patients, says: "A lot of times they will recognize me. I will joke with them by saying 'oh you're back again?', I think they feel more comfortable because they know somebody". Besides the cultural care and family videoconferencing meetings, the liaison nurses also face an unclear scope of practice within the inpatient unit. Many of the inpatient administrative tasks are scattered, and both liaison nurses report doing tasks that they are not part of their mandate, such as finding patient housing, insurance papers and overseeing patients that come from the prison system. These extra tasks are a source of frustration towards the liaison nurses, with one expressing: "it is difficult because everyone knows what they don't do, but nobody knows what they can do".

### **Positive Collegial TMH Working Environment**

All participants enjoy working with other TMH staff members. This is manifested as an intense cooperation: liaison nurses sharing patients if one person's patient load is too high, cross-coverage amongst TMH staff during vacations and psychiatrists adjusting their charting methods to reduce the workload of the clinical secretary. The clinical secretary elaborates on the situation: "The psychiatrists were supportive of changing their charting because they saw how much work I was loaded with the clinical documentation platform". One psychiatrist values the therapeutic value of working with colleagues facing similar conditions, as they enjoy the opportunity to just: "get together and exchanging different strategies, but also just being there and being able to put it out of your chest".

The clinical secretary and manager also play a central role in facilitating this collaboration, with the clinical secretary explaining their status: "I try my best to stay on top of things, so when everyone at this

clinic sees that I am worried, they are worried, but when I am calm they are ok". Additionally, the manager describes their role as: "I make changes, I write up the mandate, when I finish the mandate, I send it around for any comments, because it's a group thing. It's my role to think of objectives, administrative issues and communicating with the team and the higher-ups". However, there may be some barriers towards their full potential, as two psychiatrists are unsure of what the clinical secretary does. In addition, one psychiatrist believes in expanding the TMH clinic through hiring more psychiatrists.

The tight knit teamwork and collaboration that is present within the TMH clinic is facilitated by the positive and rapid culture of communication. Two psychiatrists, two liaison nurses and the manager all mention about the importance of communication within the TMH clinic. All those participants believe that the physical layout of the TMH clinic is conducive to rapid communication, with one psychiatrist explaining: "All of our offices are in the same corridor, and the coffee machine is in the nurses' office, so we often meet each other". One exception to this is the fact that the office of one TMH psychiatrist is at a different pavilion, which is noted by a liaison nurse and the psychiatrist in question to be a slight barrier in communication, but not serious enough to warrant an office change.

The culture of teamwork and emphasis on rapid communication enable the TMH staff to engage their mandate and deliver culturally sensitive care to the Northern communities. In order to deliver competent TMH care, two psychiatrists emphasize the importance of: listening, acknowledging their own power and always being careful about what they say. One psychiatrist explains: "Patients will sometimes have questions, but the answers will come at right time. But still, sometimes ten years later, I don't have the answer. It's very complex and you have to go with the flow, it is what I call a dance". Nonetheless, one of the psychiatrists comments that in working with Indigenous peoples: "We have to realize that there is a lot that we are powerless to help with, since there is a lot that is beyond the scope of what we can do, and we have to deal with that frustration". However, the same psychiatrist later adds: "Part of the frustration is necessary because this is the frustration that the patients feel, right? By feeling the frustration, we are getting closer to their experience".

## **Need for Digital Transformation**

All participants mention that there is a need for a comprehensive and automated documentation system, a need for digital transformation, as the current system is a paper-based one, and each psychiatrist has a different method of writing their own patient notes. The clinical secretary and all liaison nurses and psychiatrists provide specific recommendations towards improving the current documentation system, such as: having an integrated documentation system that is easily accessible at the university hospital and at the Northern clinics, making the documentation system accessible to all professionals and staff involved in the patient's care and being able to securely access the documentation system from their personal computers. Despite the call for automatization throughout the TMH clinic, a clinical documentation platform was implemented in early 2019, allowing some TMH psychiatrists working with a select few communities to electronically document their work. The clinical documentation platform is also accessible for staff at the Northern clinics.

Reception of the clinical documentation platform is mixed; TMH psychiatrists are ambivalent about the system, while the clinical secretary believes that the platform adds unnecessary extra work. To illustrate this issue, the clinical secretary explains: "Even if I upload the notes onto the platform, some Northern clinics still want me to fax the psychiatrists' notes... Maybe they don't look, since as soon as I upload it, they should see it". The clinical secretary also elaborates that the platform contributes to a sense of tension between themselves and the Northern communities, due to reluctance of the Northern communities to adopt it, further complicating the clinical secretary's work. Relatedly, a psychiatrist adds their perspective: "The problem with the documentation platform is that I can only write notes if the appointment is entered in the system, and only videoconferences are classified as 'appointments'. So, if I see anyone in-person, I can't directly enter it on the platform". However, the same psychiatrist later comments: "I am overall ok with the platform, since it is confidential, but it is not a foolproof system, and it could be a lot less cumbersome".

The adoption of the platform by some Northern clinics and non-adoption by others contribute to the overall disarray of documentation methods. Each of the psychiatrists report a different method of documentation, and this phenomenon is also noted by one liaison nurse. One psychiatrist explains their situation: "It is extremely time consuming to get my documentation done and it probably puts patient information at risk, but otherwise, I can't function. I don't know if all the psychiatrists work the same way, some write their notes out by hand, while others type it out". This issue is compounded by a recent change to the documentation regulation in 2019, specifying that all patient charts must be returned to medical archives within the university hospital by 3:00 PM.

Although all psychiatrists are adapting to this regulation, of which the most common is to keep a scanned copy of all their notes, their reaction to this regulation is more varied, due to their inherent differences in documentation methods. Three psychiatrists are ambivalent about this new regulation, while one psychiatrist is vehemently against it, saying: "This is crazy, since clinics go on after 3:00 PM, and sometimes I will stay after my patients leave to finish my notes". The clinical secretary is also against this policy, stating: "It doesn't make sense that they would have the doctor go to the archives to consult each chart for each consultation they have each day". However, the previously mentioned psychiatrist and liaison nurse also reason that the rule was put in place so that the emergency department of the hospital could have access to all the charts.

Overall, the lack of automatization, the scattered methods of documentation and the new regulation of archives have negative implications for the TMH staff. One of the main consequences is frustration, a feeling that is expressed by two psychiatrists and a clinical secretary. One psychiatrist elaborated: "As a detailed oriented person, I need to have a sense of and to take control of what is going on, which is causing me a lot of time and frustration". As a result of this concern and frustration, another psychiatrist decided to take matters into their own hands and advocate for these issues with the local health board. However, the psychiatrist described their experience in advocacy: "It is like a dance, because if you argue too personally, it gets crude, but if you are too proactive you will get burnout, yet if you are too passive it is not good either". To adjust to the lack of automatization, three psychiatrists have asked the Northern

clinics to send the notes by email, which can be the Northern nurses or GPs, but one psychiatrist commented: “To get all these papers, I push, I send emails. But it shouldn't be the GP sending the information, since doctors don't have time for that”.

## Discussion

Findings revealed that TMH care is seen by all participants, psychiatrists as well as support staff, as an extended service supportive and comparable to conventional in-person mental health. Although TMH may be more suitable for categories of mental health patients, this mode of care delivery is particularly advantageous for people living in rural and remote communities when provided in conjunction with in-person visits to the community from the psychiatrists. Attention for the cultural factors make TMH effective and rewarding for Indigenous patients and their families, local frontline workers and psychiatrists. However, in terms of sustainability, three points warrant further discussion: 1) “People” as a key success factor when providing TMH services; 2) Automatization and integration of TMH care patient data into an EMR; and 3) Building local capacity and tasks shifting through TMH and in-person psychiatric visits to the community.

Evidence supporting the implementation process of telehealth services is still very limited due to the lack of proven sustainability (38), especially on TMH services. However, the success of a TMH service cannot depend only on technological improvements. For example, in the TMH clinic, there was a historical upgrade of the videoconferencing software to individual desktops (an improvement over the previous fixed-system), but the organizational structure, management and leadership supporting the delivery of the services remain essential ongoing concerns. An important element that defines the organizational culture of the TMH clinic, according to our findings, is the critical success factor “people”; leading people and the interactions among all staff members. One study indicates that strong leadership and a good collaboration between the program and the psychiatrists were key elements to continued success (39).

All participants, providers and support staff, in this study feel like being part of a motivated team, one that is committed to their mandate in caring for mental health patients of Northern Quebec. In addition, a culture of rapid communication, facilitated by the physical layout of the TMH clinic, enhances the sense of teamwork and collaboration; which is identified as a differentiating factor between failure or success in TMH (40) and supported by sustainable telemedicine services for other patient populations, such as Portuguese a pediatric telecardiology service, which is one of the oldest telemedicine services worldwide (41). Indeed, developing a sustainable TMH program requires more than just hardware and software, as centralized support staff who provide administrative, logistic and technical support are undeniably key to the success of a telehealth service (42, 43). Attempting to implement without these trained personnel risks programmatic failure (44, 45). The need for more administrative support staff for technical problems and scheduling appointments, at both local and remote sites, is a must to run the TMH programs more smoothly (39). However, in one study (10), researchers interviewed a total of 20 healthcare professionals, three clinic managers, one program evaluator and one administrative assistant

to better understand their perceptions of TMH; yet the results are aggregated under the umbrella term 'clinicians' without providing explicit feedback from the support staff.

Another critical element for success is the organizational workflow, more specifically the storing and sharing of clinical records, which is considered in our study as a bottleneck issue. The variety of documentation systems from the TMH staff and at the Northern clinics reduces the efficiency of the clinic, and create a sense of frustration, especially affecting the workload of the clinical secretary. Due to the absent of a comprehensive EMR, one that is shared by all the healthcare systems in the Northern communities and the university-affiliated hospital, patient documentation is instead often sent by both email and fax to the Northern clinics; duplicating work and increasing the risk of a health information security breach. Challenges related to documentation are not unique to our study, the inability to integrate telehealth care-generated patient data into the EMR is a recurrent issue (46), and evidence exists that EMR solutions, ideally with multimedia capabilities, are deemed necessary to telehealth success (44).

Despite efforts in the integration of EMRs, "hold time" due to sending documents and receiving proceedings between telehealth consultations is considered as wasted time and counts for 52% in a pediatric telecardiology service (41). Without doubt, implementing a new documentation platform, such as the one used in the TMH clinic, requires the necessary adjustment of the staff and initial program issues will resolve over time; however, it is important that selected platforms are compatible with existing EMRs; allowing for a secure and seamless transition of patient information and optimizing clinical workflows. In a qualitative study exploring the effects of a family practice telehealth service adopting an EMR, healthcare providers, such as family physicians, nurses and respiratory-physical therapists, were optimistic for a full implementation, but were concerned for the potential increased administrative workload and safety issues (47).

All participants in this study are troubled by the resultant lack of local Northern mental health services and desire to see its expansion; however, they indicate that TMH can address the mental health needs and gaps in services. Despite being mostly remotely accessible as a specialist, the TMH psychiatrists in this study believe, without explicitly formulating as such, that their interventions and interactions with the frontline healthcare workers in those Northern communities may support and facilitate local capacity building. Examples include one psychiatrist meeting with Northern staff before or after the patient encounter through TMH and another psychiatrist who works with clinic nurses when no mental health nurse is available. Evidence exists that task-shifting, or strengthening the primary care health workforce, to provide mental healthcare is a promising approach in remote geographical areas (48, 49) and low-resource settings (50). In case of mental health, the tasks of psychiatrists may be shifted to psychologists, social workers, mental health nurses or other professionals. Despite contrasting views or some resistance from psychiatrists or their unawareness of this approach (51), it is evident that digital health technologies, such as TMH, may be used to leverage this method through the provision of education, supervision and partnerships with local communities (52). In addition, the monthly in-person visits by the TMH psychiatrists to the communities may be used as opportunities to pass on knowledge to the local healthcare providers. According to our findings, psychiatrists enjoy visiting and working with

the Northern clinic staff as they develop the “insider” perspective through in-person visits, while maintaining the “outsider” perspective through TMH. The need for both an insider and outsider identity is also supported in other studies outside of the Indigenous context (21, 53).

## Limitations And Future Research

The findings of this study, like all qualitative research, are linked to a certain context, in this case the provision of TMH services which are mandated and regulated by the Quebec provincial government and integrated within a larger university hospital network. Therefore, clinicians, managers and policy makers, who aim to integrate TMH services for Indigenous peoples, should evaluate the applicability of the results to their specific milieus. For example, this study is conducted in a clinical work environment that must follow the policies of the university-hospital and that uses a documentation system that is mainly paper-based. Another issue in terms of transferability of the study findings is the fact that other TMH clinics across Canada can potentially be very heterogenous with regards to staffing, communities served and technology. This is especially relevant, as different Indigenous communities have different needs and challenges. Undoubtedly, more research, qualitative as well as quantitative, is needed on the functioning of TMH teams and the separate but important roles of each team member as all contribute to the mental well-being of Indigenous peoples.

## Conclusion

To conclude, the study findings provide insights, with consideration to both clinical and organizational perspectives, into the inner workings of a professional team of psychiatrists and support staff. This allows for a team dynamic that works together exceptionally well in offering TMH services to Indigenous peoples in various communities in Northern Quebec. The results underscore the need for automatization and adoption of a comprehensive EMR where data generated through TMH is integrated. This may increase the communication and collaboration with the Northern clinics as well as the efficiency of the TMH clinic and professional satisfaction of its staff. It is hoped that these study findings may be used to directly improve the organization and delivery of mental health care in Northern Quebec, Canada.

## Abbreviations

EMR  
Electronic Medical Record  
GP  
General Practitioner  
TMH  
Telemental Health

## Declarations

## **Ethics approval and consent to participate**

Ethical approval was obtained from the Douglas Mental Health University Research Ethics Board. Participation was voluntary, and informed and written consent was obtained.

## **Consent for Publication**

Not applicable.

## **Availability of data and materials**

Due to the explicit assurances of the authors to participants that their confidentiality would be respected, all research data will not be available.

## **Competing Interests**

The authors declare that they have no competing interests.

## **Funding**

Not applicable.

## **Authors' Contributions**

AA, YH, ZD, GCL and AS designed the study and recruited participants. ZS and AA performed the interviews and data analysis. ZS and AA drafted the manuscript, while YH, ZD, GCL and AS provided their input and edits. All authors approved the final manuscript.

## **Acknowledgements**

The authors would like to thank the staff and management at the CIUSSS de l'Ouest-de-L'Île-de-Montréal for their generous support in realizing this study.

## **Authors' Information**

Ingram School of Nursing, McGill University, Montréal, Québec, Canada

Zhida Shang and Antonia Arnaert

Centre Intégré Universitaire de Santé et Services Sociaux de l'Ouest-de-L'Île-de-Montréal, Montréal, Québec, Canada

Yvonne Hindle, Zoumanan Debe, Geneviève Côté-Leblanc and Amine Saadi

## **References**

1. Burnette CE, Renner LM, Figley CR. The Framework of historical oppression, resilience and transcendence to understand disparities in depression amongst Indigenous peoples. *Br J Soc Work*. 2019;49(4):943–62.
2. Huot S, Ho H, Ko A, Lam S, Tactay P, MacLachlan J, et al. Identifying barriers to healthcare delivery and access in the Circumpolar North: important insights for health professionals. *Int J Circumpolar Health*. 2019;78(1).
3. Canadian Institute for Health Information. Geographic distribution of physicians in Canada: Beyond how many and where 2017 [Available from: [https://secure.cihi.ca/free\\_products/Geographic\\_Distribution\\_of\\_Physicians\\_FINAL\\_e.pdf](https://secure.cihi.ca/free_products/Geographic_Distribution_of_Physicians_FINAL_e.pdf)].
4. Collège des médecins du Québec. Statistiques sur les médecins du Québec 2020 [Available from: <http://www.cmq.org/statistiques.aspx>].
5. Cotton M-E, Nadeau L, Kirmayer LJ. Consultation to remote and Indigenous communities. *Cultural Consultation*: Springer; 2014. pp. 223–44.
6. Chakrabarti S. Usefulness of telepsychiatry: A critical evaluation of videoconferencing-based approaches. *World J Psychiatry*. 2015;5(3):286–304.
7. Hubble S, Lynch SB, Schneck C, Thomas M, Shore J. Review of key telepsychiatry outcomes. *World J Psychiatr*. 2016;6(2):269–82.
8. McClellan MJ, Florell D, Palmer J, Kidder C. Clinician telehealth attitudes in a rural community mental health center setting. *J Rural Ment Health*. 2020;44(1):62–73.
9. Gibson K, Kakepetum-Schultz T, Coulson H, O'Donnell S, editors. *Telemental health with remote and rural First Nations: Advantages, disadvantages, and ways forward*. National Aboriginal Health Organisation (NAHO) Conference Ottawa, November; 2009.
10. Simms DC, Gibson K, O'Donnell S. To use or not to use: Clinicians' perceptions of telemental health. *Can Psychol*. 2011;52(1):41–51.
11. Hilty DM, Yellowlees PM, Nesbitt TS. Evolution of telepsychiatry to rural sites: changes over time in types of referral and in primary care providers' knowledge, skills and satisfaction. *Gen Hosp Psychiatry*. 2006;28(5):367–73.
12. Sorvaniemi M, Ojanen E, Santamäki O. Telepsychiatry in emergency consultations: A follow-up study of sixty patients. *Telemed J E-Health*. 2005;11(4):439–41.
13. Saurman E, Kirby SE, Lyle D. No longer 'flying blind': how access has changed emergency mental health care in rural and remote emergency departments, a qualitative study. *BMC Health Serv Res*. 2015;15(1):156.
14. Hilty DM, Yellowlees PM, Parrish B, Chan S. Telepsychiatry. Effective, evidence-based, and at a tipping point in health care delivery? *Psychiatr Clin N Am*. 2015;38(3):559–92.
15. Gibson K, O'Donnell S, Coulson H, Kakepetum-Schultz T. Mental health professionals' perspectives of telemental health with remote and rural First Nations communities. *J Telemed Telecare*. 2011;17(5):263–7.

16. Gibson K, Coulson H, Miles R, Kakekakekung C, Daniels E, O'Donnell S. Conversations on telemental health: listening to remote and rural First Nations communities. *Rural Rem Health*. 2011;11(2):1656.
17. Wagnild G, Leenknecht C, Zauher J. Psychiatrists' satisfaction with telepsychiatry. *Telemed J E-Health*. 2006;12(5):546–51.
18. Cowan KE, McKean AJ, Gentry MT, Hilty DM. Barriers to use of telepsychiatry: Clinicians as gatekeepers. *Mayo Clin Proc*. 2019;94(12):2510-23.
19. Hilty DM, Ferrer DC, Parish MB, Johnston B, Callahan EJ, Yellowlees PM. The effectiveness of telemental health: a 2013 review. *Telemed J E-Health*. 2013;19(6):444–54.
20. Whitten P, Kuwahara E. A multi-phase telepsychiatry programme in Michigan: organizational factors affecting utilization and user perceptions. *J Telemed Telecare*. 2004;10(5):254–61.
21. Shreck E, Nehrig N, Schneider JA, Palfrey A, Buckley J, Jordan B, et al. Barriers and facilitators to implementing a U.S. Department of Veterans Affairs Telemental Health (TMH) program for rural veterans. *J Rural Ment Health*. 2020;44(1):1–15.
22. Wynn R, Bergvik S, Pettersen G, Fossum S. Clinicians' experiences with videoconferencing in psychiatry. *Stud Health Technol Inform*. 2012;180:1218–20.
23. Raja L, Uscher-Pines P, Qureshi N, Huskamp HA, Busch AB, Ateev Mehrotra. Use of tele-mental health in conjunction with in-person care: A qualitative exploration of implementation models. *Psychiatr Serv*. 2020;71(5):419–26.
24. Gibson K, Simms D, O'Donnell S, Molyneaux H. Clinicians' attitudes toward the use of information and communication technologies for mental health services in remote and rural areas. *Canadian Society of Telehealth (CST 2009)*; 2009/10/06; Vancouver, British Columbia. Collection / Collection: NRC Publications Archive / Archives des publications du CNRC2009.
25. Yellowlees P, Richard Chan S, Burke Parish M. The hybrid doctor-patient relationship in the age of technology - Telepsychiatry consultations and the use of virtual space. *Int Rev Psychiatry*. 2015;27(6):476–89.
26. Hilty DM, Yellowlees PM. Collaborative mental health services using multiple technologies: the new way to practice and a new standard of practice? *J Am Acad Child Adolesc Psychiatry*. 2015;54(4):245–6.
27. Hughes MC, Gorman JM, Ren Y, Khalid S, Clayton C. Increasing access to rural mental health care using hybrid care that includes telepsychiatry. *J Rural Ment Health*. 2019;43(1):30–7.
28. Shore JH, Savin DM, Novins D, Manson SM. Cultural aspects of telepsychiatry. *J Telemed Telecare*. 2006;12(3):116–21.
29. Savin D, Glueck DA, Chardavoyne J, Yager J, Novins DK. Bridging cultures: Child psychiatry via videoconferencing. *Child Adolesc Psychiatr Clin N Am*. 2011;20(1):125–34.
30. Mucic D. International telepsychiatry: a study of patient acceptability. *J Telemed Telecare*. 2008;14(5):241–3.

31. Ye J, Shim R, Lukaszewski T, Yun K, Kim SH, Rust G. Telepsychiatry services for Korean immigrants. *Telemed J E-Health*. 2012;18(10):797–802.
32. Volpe T, Boydell KM, Pignatiello At. Mental health services for Nunavut children and youth: evaluating a telepsychiatry pilot project. *Rural Rem Health*. 2014;14(2):2673.
33. Yeong ML, Ismail R, Ismail NH, Hamzah MI. Interview protocol refinement: Fine-tuning qualitative research interview questions for multi-racial populations in Malaysia. *Qual Rep*. 2018;23(11):2700–13.
34. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol*. 2006;3(2):77–101.
35. Thomas DR. A general inductive approach for analyzing qualitative evaluation data. *Am J Eval*. 2006;27(2):237–46.
36. Corbin JM, Strauss A. Grounded theory research: Procedures, canons, and evaluative criteria. *Qual Sociol*. 1990;13(1):3–21.
37. Lincoln YS, Guba EG. *Naturalistic inquiry*. Newberry Park.: Sage; 1985.
38. Burke BL Jr, Hall RW. Telemedicine. Pediatric applications. *Pediatrics*. 2015;136(1):293–308.
39. Lauckner C, Whitten P. The state and sustainability of telepsychiatry programs. *J Behav Health Serv Res*. 2016;43(2):305–18.
40. Varrell JR, Boyce OC. Telepsychiatry Takes Teamwork. In: Maheu MM, Drude KP, Wright SD, editors. *Career paths in telemental health*. Cham: Springer International Publishing; 2017. pp. 105–14.
41. Maia MR, Castela E, Pires A, Lapão LV. How to develop a sustainable telemedicine service? A pediatric telecardiology service 20 years on - an exploratory study. *BMC Health Serv Res*. 2019;19(1).
42. Jarvis-Selinger S, Chan E, Payne R, Plohman K, Ho K. Clinical telehealth across the disciplines: lessons learned. *Telemed J E-Health*. 2008;14(7):720–5.
43. Puskin DS, Cohen Z, Ferguson AS, Krupinski E, Spaulding R. Implementation and evaluation of telehealth tools and technologies. *Telemed J E-Health*. 2010;16(1):96–102.
44. Kim TJ, Arrieta MI, Eastburn SL, Icenogle ML, Slagle M, Nuriddin AH, et al. Post-disaster Gulf Coast recovery using telehealth. *Telemed J E Health*. 2013;19(3):200–10.
45. Whitten P, Adams I. Success and failure: a case study of two rural telemedicine projects. *J Telemed Telecare*. 2003;9(3):125–9.
46. Hanley J, Ure J, Pagliari C, Sheikh A, McKinstry B. Experiences of patients and professionals participating in the HITS home blood pressure telemonitoring trial: a qualitative study. *BMJ Open*. 2013;3(5).
47. Davidson E, Simpson CR, Demiris G, Sheikh A, McKinstry B. Integrating telehealth care-generated data with the family practice electronic medical record: qualitative exploration of the views of primary care staff. *Interact J Med Res*. 2013;2(2):e29.
48. Hensel JM, Ellard K, Koltek M, Wilson G, Sareen J. Digital health solutions for Indigenous mental well-being. *Curr Psychiatry Rep*. 2019;21(8):68.

49. Javadi D, Feldhaus I, Mancuso A, Ghaffar A. Applying systems thinking to task shifting for mental health using lay providers: a review of the evidence. *Glob Ment Health*. 2017;4.
50. Kottai S, Ranganathan S. Task-shifting in community mental health in kerala: Tensions and ruptures. *Med Anthropol*. 2020:1–15.
51. Agyapong VIO, Farren C, McAuliffe E. Improving Ghana’s mental healthcare through task-shifting- psychiatrists and health policy directors perceptions about government’s commitment and the role of community mental health workers. *Glob Health*. 2016;12(1):57.
52. Hoeft TJ, Fortney JC, Patel V, Unutzer J. Task-sharing approaches to improve mental health care in rural and other low-resource settings: A systematic review. *J Rural Health*. 2018;34(1):48–62.
53. Jensen EJ, Wieling E, Mendenhall T. A phenomenological study of clinicians’ perspectives on barriers to rural mental health care. *J Rural Ment Health*. 2020;44(1):51–61.