How to Support Patient-Provider Communication During Telemedicine Consultations? A Scoping Review of Challenges and Existing Tools

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ABSTRACT

In light of the COVID-19 public health restrictions, the use of telemedicine has been on the rise. This care delivery model is valued for its potential to increase care access while providing safe care. However, it changes the way patients and providers interact. Communication during video consultations requires embodied engagement to compensate for the physical distance. This study aimed to identify patient-provider communication challenges during video consultations and assess the tools developed to support patient-provider communication according to the published literature from 2019 to 2022. Searches of eight databases (Medline (Ovid), PubMed, ProQuest Nursing and Allied Health, CINAHL, Web of Science, Scopus, PsychInfo, and Social Services Abstracts), and a Google search for grey literature were conducted. Nineteen articles met inclusion criteria. Findings show that patients and providers share the same concerns, such as a lack of trust relating to physical distance, the ability to establish a meaningful relationship, and a lack of confidence in clinical assessment. The available tools, however, are based on guidelines that are difficult to adapt to the diversity of interaction contexts. There is a need for tools that consider the complexity of patient-provider communication in order to address the challenges stemming from the lack of trust in the context of video consultations. These findings can inform strategies for effective patient-provider communication during video consultations to improve the quality of care and optimize outcomes in this context.

RÉSUMÉ

Au vu des restrictions de santé publique COVID-19, le recours à la télémédecine est en hausse. Ce modèle de prestation de soins est apprécié pour son potentiel à accroître l'accès aux soins tout en fournissant des soins sûrs. Cependant, il modifie la manière dont les patients et les soignants interagissent. La communication lors des consultations vidéo nécessite un engagement corporel pour compenser la distance physique. Cette étude visait à identifier les défis de la communication patient-soignant pendant les consultations vidéo et à évaluer les outils développés pour soutenir la communication patient-fournisseur selon la littérature publiée de 2019 à 2022. Des recherches ont été effectuées dans huit bases de données (Medline (Ovid), PubMed, ProQuest Nursing and Allied Health, CINAHL, Web of Science, Scopus, PsychInfo et Social Services Abstracts) et une recherche Google de littérature grise. Dix-neuf articles répondaient aux critères d'inclusion. Les résultats montrent que les patients et les soignants partagent les mêmes préoccupations, telles que le manque de confiance lié à la distance physique, la capacité d'établir une relation significative et le manque de confiance dans l'évaluation clinique. Les outils disponibles sont toutefois basés sur des lignes directrices difficiles à adapter à la diversité des contextes d'interaction. Il est nécessaire de disposer d'outils qui tiennent compte de la complexité de la communication patient-soignant afin de relever les défis découlant du manque de confiance dans le contexte des consultations vidéo. Ces résultats peuvent contribuer à l'élaboration de stratégies pour une communication efficace entre le patient et le soignant pendant les consultations vidéo, afin d'améliorer la qualité des soins et d'optimiser les résultats dans ce contexte.

INTRODUCTION

In 2019, three main barriers to widespread uptake of virtual care were identified in Canada: (1) the governance of compensation mechanisms, (2) licensure restrictions on the provision of care across provincial and territorial boundaries, and (3) a lack of interoperability and connectivity between and among patients, physicians, and health facilities.[1] The World Health Organisation declared a global coronavirus pandemic on 11 March 2020, which has forced the healthcare system to adopt remote avenues for care delivery. In-person clinical consultations were limited for the safety of patients and health care professionals. Most non-urgent care was provided through telephone or videoconference.[2] Virtual care became an accepted way of delivering care to patients efficiently and effectively.[3]

A growing amount of literature focuses on the move to the virtual care delivery model. Telemedicine implementation recommendations highlight the necessity for proper healthcare provider education.[1,4] Virtual care must now be incorporated into the medical curriculum and continuing professional development.[1] In addition, research has focused on ways to facilitate the transition to virtual care in many health specialties. Emphasis is put on telemedicine integration and implementation,[3,5-7] usability,[8] and uptake.[9] Video consultations are primarily examined in comparison to face-to-face consultations to evaluate satisfaction or assess user experiences,[10,11] satisfaction based on specific populations (i.e., older adults), and physical and geographical resource constraints.[12-14]

Virtual care has the potential to allow providers to reach more patients regardless of their location, decrease waiting room congestion, and limit wait times for services. However, virtual care changes the way patient and provider interact[15] and creates a unique therapeutic framework involving changes in the provider-patient relationship.[4] Patient-provider communication requires embodiment to compensate for the physical distance. Health communication resources are necessary to support the development of training and orientation programs for professionals, especially as the Covid-19 pandemic accelerates the implementation of telemedicine programs with visits occurring by phone or via videoconferencing. Accordingly, we conducted a scoping review to answer the following questions: (1) What are the challenges of telemedicine consultations in terms of patient-provider communication?; (2) What tools have been developed to support patient-provider communication during telemedicine consultations?

METHODS

A scoping review was performed using the PRISMA guidelines.[16] Only studies published since 2019 were examined to account for the increased use of telemedicine during the pandemic. The search strategy combined MeSH terms, broad-based terms, and free text terms for the concepts under study: 'telemedicine,' 'patient-provider communication,' 'challenges,' and 'tools.' Three methods were used to locate information for this review. First, we conducted a search on Google Scholar and the University of Ottawa library to identify studies and review their reference lists to find relevant articles. Secondly, we comprehensively searched eight databases for peer-reviewed literature: Medline (Ovid), PubMed, ProQuest Nursing and Allied Health, CINAHL, Web of Science, Scopus, PsychInfo, and Social Services Abstracts. Lastly, we searched grey literature using Google search, and we included a search of the preprint database (OSF preprints) to examine publications currently under review.

Inclusion criteria

Included articles were published in English or French from 1 January 2019 to 15 February 2022, from any geographical location. All types of empirical research and grey material focusing on consultations by videoconferencing were included if they: (1) examined patient-provider communication during videoconferencing consultations in any specialty; and (2) reported (a) at least one patient-provider communication challenge (of any type) from patients or providers' perspectives or (b) at least one tool (such as checklists, decision-making aids, algorithms) to address patient-provider communication challenges.

Exclusion criteria

Publications were excluded if they: (1) examined asynchronous consultations, (2) did not pertain to patient-provider communication during videoconferencing consultations, (3) did not report patient-provider communication challenges or identify tools to support patient-provider communication challenges, or (4) were

editorials and letters.

Analysis

The first author conducted the analysis, and all co-authors reviewed and provided feedback. In keeping with scoping review methodologies, the methodological rigour of the publications was not examined.[16] The extracted data was collated to identify key challenges and the tools developed. Data were synthesized using summary tables grouping the reported patient-provider challenges per specialty. They were further differentiated into those perceived by patients and those perceived by providers.

RESULTS

The initial search yielded 972 relevant publications, including literature reviews and grey literature. Following the removal of duplicates and title review, 346 abstracts were screened. Seventy-four published articles, reports, and conference proceedings were reviewed in full text per the eligibility criteria. A total of 19 publications comprising 13 empirical studies and 6 grey literature articles are included in this review. Eleven empirical studies reported on patient-provider communication challenges with two reporting tools (strategies to address patient-provider communication challenges). These studies were conducted across various clinical specialties and contexts (psychiatry, primary care, general practice, outpatient virtual clinic from a broad range of specialties). Overall, this review includes 11 articles reporting patient-provider communication challenges and 10 publications reporting tools to support patient-provider communication in this context.

The 11 articles reporting patient-provider communication challenges include patient-reported challenges (n=8), provider-reported challenges (n=8), and challenges reported by both (n=5) (see **Supplementary Table 1**). The majority of the ten tools (n=8) focus on providing guidelines to support care providers' practice. One tool focuses on patients only and one on both patients and providers (see **Supplementary Table 2**).

Patient-provider communication challenges

Patient and provider communication challenges are common across specialties. Many of the selected articles in this review report difficulties in establishing trust and patient-provider relationships during video consultations.[17-21] The challenges reported in the literature can be grouped under two themes: (1) trust and physical distance, and (2) confidence in clinical assessment and embodied engagement.

Trust and physical distance

Trust, or one's willingness to rely on or be vulnerable to other parties, is fundamental in medical relationships.[22,23] Trust in the technology, trust in the patient performing a physical exam, and trust in the physician providing the best care are some of the patient and provider reported concerns. Patients experience challenges related to the complexity of scheduling appointments,[17] technical difficulties such as time lags that can cause a degree of talking over and affect the consultation,[15] limited access to technology or a lack of technical skills,[21,24,25] and the system security and privacy.[24-26] In the context of video consultations, trust is difficult due to compromised nonverbal communication,[18] the lack of physical touch, and the general feeling of loss experienced on both sides of the screen.[27]

Patients and providers find it difficult to discuss complex issues, such as talking about sexual health or delivering difficult news during telemedicine consultations.[15] In addition, patients report being unable to adequately communicate their problems: they experience barriers to speaking up and asking questions, such as lack of preparedness and comfort, causing apprehension.[28] It is challenging to interject and stop the provider without causing talking over because of the distance.[19] For providers, the difficulty resides in having to be more deliberate and pay more attention to their own communication behaviors than in traditional in-person visits.[17] For example, looking into the camera to maintain eye contact causes them to look away from the screen, thus missing the patients' body language. The absence of eye contact similarly affects patients who may perceive it as a lack of attention from the provider.[17,19]

Time limitations are accentuated in virtual visits.[20] Patients report providers missing appointments or contacting them outside the agreed time and insufficient consultation time.[24] Patients observe that providers are under time pressure.[19] They feel rushed by providers who mainly control the flow of conversation.[20] They deplore not always having time to discuss all their issues.[24] However, according to providers, the consultations are shorter because patients talk less.[24]

They feel patients tend to get to the point faster during virtual consultations.[24]

Further, despite easier access for people who cannot easily travel,[29] technology disadvantages specific populations, increasing the risk of inequalities in access to care. Certain groups of vulnerable patients are unable to navigate or do not possess the technology required to participate in telemedicine visits.[27] These include older adults, those with low socioeconomic status,[27] or those experiencing language barriers and hearing difficulties.[21,24,26]

Moreover, the physical distance between patients and providers makes it difficult to establish a positive relationship.[17] Video consultations attenuate collaborative conversations, which leads to less trust.[26] Although patients and providers can see and talk to each other, the contact, in this context, is less personal.[30] Building a relationship, a form of proximity, at a distance, is more complex because patients and providers use their senses differently.[19] The physical cues they typically rely on during consultations, such as eye contact and body language, are more challenging to rely on during video consultations. Patients and providers express the need to create face-to-face contact prior to video consults to allow both to get to know each other.[18] Challenges in building trusting relationships are especially significant when patients and providers have no pre-existing relationship prior to the virtual consultation.[15,18,30,31] Along this vein, a previously established relationship improved patient and provider experience during videoconferencing.[15] Overall, it is easier to maintain a pre-existing relationship during video consultation than to establish a new one.

Confidence in clinical assessment and embodied engagement

Some studies recommend digital technicians' support to ensure minimal disruption to therapeutic communication and to enhance patients' and providers' confidence and self-efficacy.[18] However, when the virtual consultation requires a physical examination, both patients and providers find it challenging to trust the quality of the assessment.[17,19,24,27,28,32] The absence of physical examinations is a concern for patients, especially when symptomatic,[21] and they worry about errors in their care when the visit requires performing a physical examination.[19] Providers are also uncomfortable trusting physical examinations performed by patients.[31] This lack of trust in patient-performed physical examinations

has prompted patients and providers to question the suitability of virtual care for some conditions.[15] This care delivery model seems more beneficial for consultations where physical examination is not required, such as mental health and chronic illness, managing laboratory results, or medication reviews.[15]

The absence of physical contact weighs as much on patients and providers. Virtual care calls for embodied engagement which consists of strategies used by the health professional to reproduce a physical presence during a video consultation such as gestures and body positioning to build a relationship with the patient.[33] The loss of personal connections and touch diminishes expected rituals that typically strengthen patient-provider relationships.[27] Not being able to read the patients' body language alters providers' impression of what the patient is trying to communicate.[17] The alteration of sensory data collection during visits also alters building provider-patient relationships. For example, the traditional greeting with a handshake that begins or continues a trusting relationship during face-to-face consultation must be accomplished with verbal and nonverbal communication.[17] Consequently, health care providers' ability to engage sufficiently to win the patients' trust becomes impaired.

Tools to support patient-provider communication

Several guidelines, tips, playbooks, and checklists have been developed by different research teams in Canada, Europe, and the US to support providers in the rapid roll-out of telemedicine following the onset of the Covid-19 pandemic. These tools mainly focus on providing guidelines to support care providers' practice with only one tool focusing on both patients and providers and another on patients only (see **Supplementary Table 2**).

Tools for health care providers

The Canadian Medical Association's Virtual playbook outlines considerations to succeed in providing safe, effective, and efficient care; it provides recommendations to help integrate virtual care into the providers' practice workflow, develop a webside manner, and determine what problems can be safely assessed and treated during virtual care.[31] The majority of these recommendations are technology centred rather than patient centred. Relating to privacy concerns, earphones/headphones, which add

privacy in work environments with inadequate sound insulation, can prevent the patient from being overheard by others in close proximity to the provider.[31] In addition, to develop a trusting relationship with the patient, the provider must develop a webside manner and make an extra effort to constantly engage with the patient and assure them that they have full attention with eye contact, body language, and attentiveness.[31]

A virtual tip sheet based on the R.E.D.E. (Relationship: Establishment, Development, and Engagement) Model® of healthcare communication, a relationship-centred communication approach developed in the US, is also available. The tip sheet presents ten best practices incorporating clinicians' preferred phrases that have comforted their patients and allowed them to connect in a meaningful way such as, "what I hear you saying is…" or "tell me more…".[34] The model explores three primary phases of a relationship: establishment, development, and engagement. The establishment phase is where providers must convey value and respect with the welcome, collaboratively set the agenda, introduce the computer, and demonstrate empathy using S.A.V.E. (support/partnership, acknowledge, validate, emotion naming). In the development phase, providers engage in reflective listening, elicit patient narrative, and explore the patients' perspective using V.I.E.W. (vital activities, ideas, expectations, worries). The third phase, engagement, includes sharing diagnosis and information, collaboratively developing treatment plans, providing closure, and dialogue using A.R.I.A. (assess using open-ended questions, reflect patient meaning and emotion, inform, and assess patient understanding and reaction to the information provided). The R.E.D.E. Model® of healthcare communication is also used for the elaboration of the Healthcare Communication guidelines for digital health communication where the focus is on establishing the relationship, expressing empathy verbally and nonverbally, and developing and engaging the relationship.[29] Provider empathy in virtual visits allows for connecting with patients and relating to them. Since non-verbal cues such as a nod, leaning forward or raising eyebrows may not be as effective during virtual consultations due to audio or visual lag, this tool emphasizes conveying empathy without physical contact. Specific gestures such as putting a hand over the heart or touching ones' own arm are effective ways of showing empathy visually. Additionally, non-verbal cues must be larger and slower than in person to make them more prominent on camera.[29]

Expressing empathy is one of the seven steps proposed in the Canadian compilation guide developed through the Patient-Centered Outcomes Research Institute Project Program Award.[31] The remaining steps are: developing a strong webside manner, ensuring the availability of proper tools (i.e., headset, internet connection), setting the scene, dressing for success, checking the technology, minding all movements, and awareness of eye movement. To show empathy, it is recommended to start conversations with small talk, encourage the patient to ask questions, increase using verbal empathic statements to enhance what is conveyed through body language and facial expressions, and avoid over-exuberant body language that can be distracting. Providers must pay attention to eye movements. Eye contact can be vital for building trust, conveying empathy, and attentiveness, enhancing the therapeutic encounter.[31] To promote eye contact, camera placement at eye level or aligned with the video feed is ideal. Providers must inform patients when consulting documents or charts on the screen, so they are aware. Picture-in-picture feature must also be turned off to avoid distraction.

Two empirical studies from the US present strategies to address the reported challenges. The strategies from interviews with providers in primary care are first, to ensure inclusion and equitable access to care. It is recommended to offer consultation via whichever technology is available to the patient as well as technical assistance to all patients before their appointment, easy access with no downloading or accessing a patient portal. Second, it is recommended to address the lack of physical examination, teach patients to check their vital signs using home equipment (e.g., blood pressure monitor, pulse oximeter, thermometer, scale). To compensate for the lack of personal connections and touch, it is important to use empathy, eye contact, and engagement in small talk when possible. Lastly, because visits tend to be shorter, it is important to solicit additional patient concerns actively, give patients ample time to raise concerns, inform patients of expected visit duration, and consider devoting extra time to patient counselling.[27] The second list of strategies from interviews with patients with type two diabetes focuses on addressing four challenges.[19] Relating to concerns about errors in care due to difficulty completing the physical exam, education materials to encourage patients to speak up and express their concerns

are necessary. To decrease perceptions that providers pay less attention to them, patient education materials that legitimize patient use of active communication behaviors such as asking questions and expressing concerns must be developed. Provider education is also necessary to teach specific behaviors such as making eye contact, providing verbal cues, and being mindful of actions. When it comes to barriers to speaking up and asking questions, adequate patient preparation for the visit and encouragement to tell their stories is needed. Lastly, educational material that encourages patients to communicate openly and honestly is necessary to address difficulty establishing a patient-provider relationship.[19] Providers must adequately prepare before virtual consultations. Specific questions relating to the timing and appropriateness of video consultations must be addressed on a case basis to ensure proper patient care.[35]

Tools for patients

Tools developed for patients also emphasize the need for adequate patient preparation to ensure effective consultation. The focus of virtual visits depends on the organization and quality of communication between the patient and provider.[20] To help patients and providers work together, a 4-step PREP guide (Prepare, Rehearse, Engage, and Persist) was developed in the US by focusing on what is known about effective communication.[20] The goal with these steps is for patients and providers to recognize what they can do differently to coproduce more efficient, effective interactions. In like manner, the Canadian Medical Association's Virtual playbook for providers comes with a companion resource for patients, developed in collaboration with patients and their families to help patients prepare and participate in video consultations.[25] Step-by-step guidelines are provided on planning, setting up (communications device and connection), choosing an appropriate location, and using earphones/headphones because they provide a better microphone, sound, and greater privacy.[31]

DISCUSSION

This review reports patient-provider communication challenges during video consultations from patient and provider perspectives and summarizes the tools developed to support the communication. Although some patients prefer face-to-face consultations,[28] patients' and providers'

perception of care via video consultation is overall positive. Patients appreciate seeing the provider[36] and receiving care without going to a clinic,[37] making video consultation preferred over telephone consultations. Nevertheless, communication barriers related to the virtual context must be addressed to support both patients and providers. In this context, the main communication challenges relate to one overarching theme: trust.

Patient-centred care prioritizes relationships. It is considered the best practice to improve care and health outcomes for many populations.[38] However, establishing a relationship can be impaired due to a lack of trust between patients and providers. Establishing trust can be challenging, especially when there is no pre-existing relationship.[31] In our study, many articles address the concept of trust[15,26,31,39] and the notion of physical distance, making visible the nuances to the dimension of trust. Beyond the lack of trust in professionals providing the best care considering the distance, there is a lack of trust related to the quality of clinical assessments.[19,27]

Since the start of the Covid-19 pandemic, several tools have been made available to support patients and providers during video consultations. However, they are mainly aimed at supporting providers in using the technology. The tools made to support the patients focus on their preparation for the visit and managing their expectations. Although these tools address the majority of patients' and providers' identified challenges, such as difficulties with technology and privacy concerns,[29] risk of inequalities in access to care,[27,29] difficulty speaking up,[19] making up for the alteration of non-verbal cues,[29,34,39] establishing a relationship,[19] and lack of physical assessment,[19] there is a notable gap relating to trust.

Most tools included in this review were developed without patient and provider contribution. The tools seem to meet the needs of linear communication[40]; however, communication is not information transfer only, nor a prescriptive list that can be executed step by step. Health communication sciences can help bridge this gap by allowing the understanding of communication processes in their complexities.[41,42] For example, some tools provide recommendations to support providers in establishing a relationship with patients during video consultations calling for open communication, honesty, webside manner, and empathy, without considering the patient on the other

side of the screen. More tools are needed to support patient communication and address the patient-identified challenges experienced during video consultations. Patients and providers are not passive receivers.[40] They react to messages, verbal or non-verbal.[43] Patient-provider interaction is a process of negotiation, co-construction of meaning, where providers lead the communicative encounter by trying to build a shared common background, but also a trusting relationship.[47] Further collaborations are needed to optimize the current tools and develop new ones that can adapt to the diversity of interaction contexts.

Virtual care eliminates the need for patients and providers to be in the same physical space.[31] However, research demonstrate that time is a challenge in virtual care because visits are shorter.[19,24,27,29,44] While providers attribute visit lengths to patients talking less in virtual visits than in-person and see the shorter duration as an opportunity to manage their time better,[24] minimal patient participation can lead to patient disengagement.[19,34] Tools to support patients in expressing themselves during video consultation are necessary. Patients' active participation in healthcare care leads to greater satisfaction, increased compliance, and better health outcomes.[45] Further research on patient-provider communication to improve patient participation in this context is warranted.

Moreover, research suggests that building a patient-provider relationship during virtual consultations is easier when there is a pre-existing relationship.[15,18,30] New patients tend to come in with significant anxiety and vulnerability relating to starting a relationship as a new patient to a new provider.[46] Further research is needed to examine new relationship building and develop tools to support these relationships in the context of video consultations.

STUDY LIMITATIONS

This review reports on publications from 1 January 2019 to 15 February 2022 and does not report on challenges or tools developed prior to this period. The search criteria included articles in English and French, thus excluding possible tools that may be available in other languages. Further, no formal quality assessment was conducted in this review, as per standard practice for scoping review. Lastly, the results in this review may not apply to care contexts not examined in the studies included in this review.

CONCLUSION

Virtual care changes the way patients and providers interact. Providers can no longer perform the clinical examination themselves or show empathy with a comforting gesture as they would do in person. This review highlights several patient-provider communication challenges, mainly related to trust, in the context of video consultations and various tools developed to support communication in this context. However, little information relating to addressing trust-building in this context is provided in the available tools mainly based on guidelines that are difficult to adapt to the complexities of patient-provider communication. Additional studies examining communication with a systemic approach would better respond to these challenges, improve existing tools, or, at least, offer avenues of reflection for developing new ones to improve the quality of care and optimize outcomes in this context. In conclusion, we believe that the results presented in this review highlight the need to integrate into the curriculum training that will allow future physicians to become familiar with teleconsultations, notably by developing specific skills to perform a physical examination at a distance and adapt their communication style to this new context. The use of simulation as a training method could be an interesting avenue to explore in order to allow physicians to be confronted with various teleconsultation scenarios and to learn to adapt their clinical practice.

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