Telemedicine Strategies

Home for the Summer Program 2020

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Introduction

Telemedicine was first defined in the 1970s as the use of technologies to improve patient outcomes by increasing access to care and medical information. [1] More recently the College of Physicians and Surgeons of Manitoba defined telemedicine as "a medical service provided remotely via information and communication technology", thus, the definition of telemedicine is as broad as the methods of communication and services, however, the principle of providing remote care remains the same. [2] While the technology to deliver virtual care has been available for many decades, different barriers have prevented its implementation across Canada, including payment models, licensure and quality standards, operability and regulations, as well as education and training. [3]

Since the onset of COVID-19, telemedicine has played an essential role in helping physicians to continue caring for their patients. A June 2020 poll by the Canadian Medical Association indicated that 91% of patients surveyed are satisfied with the virtual care they have received and moving forward 46% would prefer to use virtual methods as a first point of contact to communicate with their physician in the future. [4] Telemedicine is a tool that can be used to provide rapid, safe, accessible and high-quality care to patients. Telemedicine has been shown to help with better management of chronic diseases resulting in fewer hospital stays, fewer visits to the emergency department and fewer deaths. [5] The increased accessibility to virtual care is especially important for patients in rural and remote communities, where health care access is oftentimes difficult. Despite the many advantages of telemedicine, very few physicians and patients are adequately educated on how to best practice and access telemedicine. [6] Therefore, there is an increasing need to explore the limitations of telemedicine and come up with solutions to improve the practice of telemedicine. In addition, it is important to develop guidelines and recommendations to inform both physicians and patients on how they can best use telemedicine to address different health needs. [7]

The objective of our quality improvement project was two-fold: (1) to explore the challenges rural physicians face when using telemedicine; and, (2) to come up with strategies to address these challenges.

Materials and Methods

Methodology

We used an action research approach to our project. An action research project emphasizes stakeholder collaboration, involvement, control and ownership over the project. [8] We bounded the study within the rural communities of Morden and Winkler, Manitoba. As this study is a quality improvement project and according to the Article 2.5 of the Tri-Council Policy Statement for ethical research conduct, the project does not

require local University ethics board approval. [9] Participants provided implied consent by taking part in the project.

Procedures

We recruited physicians within the rural communities of Morden and Winkler, Manitoba to complete an online survey. The survey was sent out via email through clinic managers in the local health clinics in both communities.

An online survey was used as it offers the most flexibility and convenience [10] considering the physicians' schedules. The survey consists of 7 questions (attached as Appendix A) to elicit basic information regarding telemedicine appointments, common challenges that the respondents have faced and any strategies that they have used to address challenges they have faced.

Analysis

Data was analyzed using an inductive qualitative approach. [11] Responses were read by both authors and concepts were identified through thematic analysis. Concepts were merged and/or collapsed as the analysis progressed through constant comparison of ideas between the two authors. Final themes and interpretations were discussed between the two authors until consensus was achieved.

Knowledge Translation

An infographic (Appendix B) was designed by both authors and sent to clinic managers and those surveyed that indicated wanting a copy sent to their email. Moreover, the project will be presented as part of completion of the *Home for the Summer Project Presentation*.

Results

In total, 19 responses were obtained from 62 physicians surveyed with a response rate of 31%.

Over 60% of physicians surveyed indicated that the average telemedicine visit lasted 5-10 minutes, over 25% responded that visits lasted between 10-15 minutes (Figure 1). Moreover, almost 95% of physicians surveyed indicated that telemedicine appointments take less or almost equal time than in-person appointments (Figure 2). The physicians surveyed have also indicated that patients are less likely to cancel a telemedicine appointment.

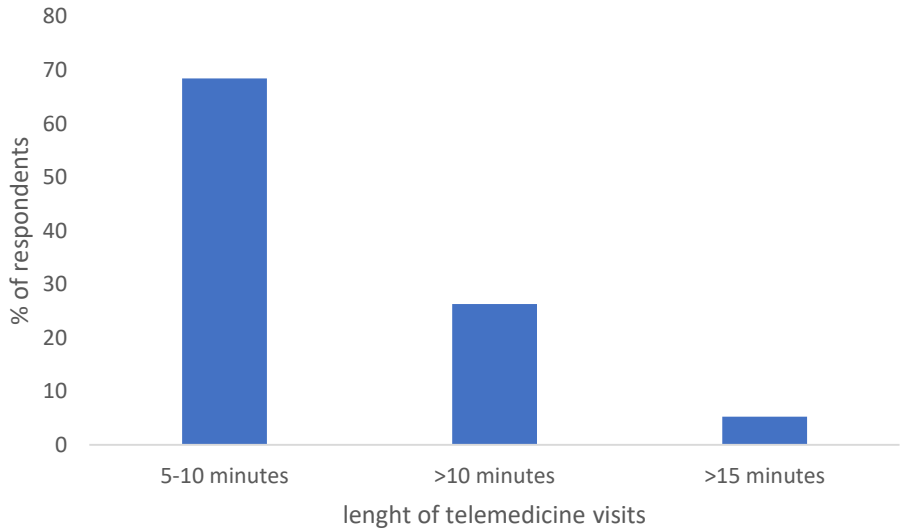

Fig 1. Percentage of physicians reporting the average length of telemedicine visits

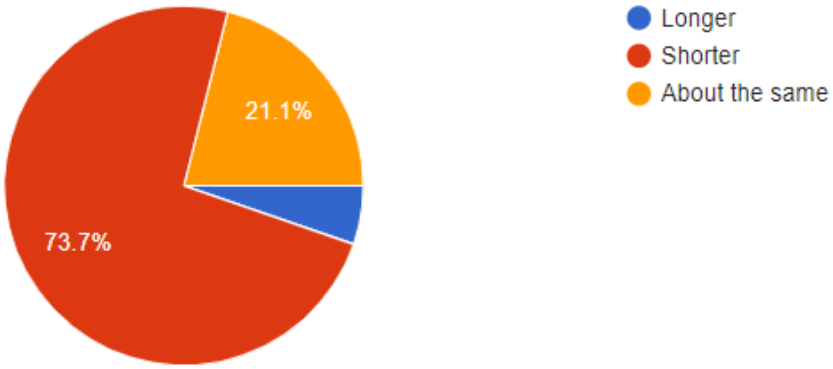

Fig 2. Percentage of physicians reporting the average length of telemedicine visits as compared to in-person visits

Challenges with telemedicine

Physicians surveyed indicated that they have found it challenging to schedule visits and stay on time. Approximately 60% of physicians reported that they found it difficult to stay on time during telemedicine appointments (Figure 3).

The physicians have indicated that scheduling was a major challenge experienced with telemedicine appointments. One physician noted that “When we mix in person [appointments] with [telemedicine appointments], sometimes in person [appointments] take longer than scheduled, [causing late telemedicine appointments]”.

Another challenge experienced by physicians is the lack of visual cues associated with in-person appointments. These cues include cues associated with explaining their health condition (especially if there is a language barrier) or cues associated with ending the appointment. This then leads to physicians not being able to employ their exit strategy for in-person appointments which can cause telemedicine appointments to go over-time.

Lastly, errors related to calling wrong phone numbers or patients not picking up the phone are common challenges faced by physicians during telemedicine appointments as well.

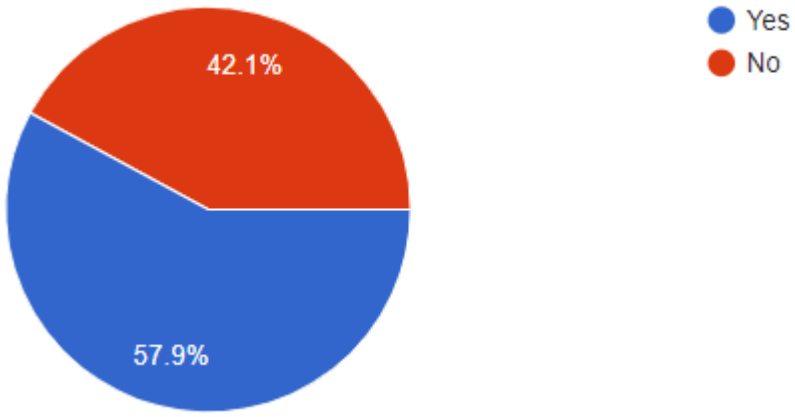

Fig 3. Percentage of physicians reporting challenges with staying on-time during telemedicine visit

Strategies

Physicians have also indicated several strategies to manage these challenges from telemedicine appointments. Scheduling patient visits better has been suggested by multiple physicians surveyed. While scheduling looks different based on physician schedules, most indicated preferring not to mix telemedicine appointments in between in-person appointments. This leads, according to several physicians surveyed, to “better flow” and makes it “easier to [stay] on time”.

Technology and equipment have also been suggested as potential strategies to address telemedicine appointment challenges. Several physicians have noted that using a hands-free device (e.g. headset) will allow for charting patient notes during the phone visit. Moreover, physicians have also indicated that less dialing error will be possible if one-button dialing would be possible via their electronic medical record.

A third strategy suggested by the physicians include better screening for patients prior to telemedicine appointments. Several physicians noted gathering all available information prior to the visit (e.g., blood pressure, weight, photos, etc). Moreover, physicians noted that better screening could also mean choosing between a video-enabled appointment versus a phone appointment as necessary for the patient's concerns. Several physicians have also suggested pre-screening questionnaires to gather more information from the patient prior to the visit allows for better triaging (e.g. for conditions or issues better managed in-person) and allows for a more efficient telemedicine appointment.

Patient education on the benefits, limitations and expectations associated with telemedicine appointments is another strategy suggested by the physicians. This could include education on limiting interruptions during telemedicine appointments (e.g. from the patient's family members), writing down main concerns prior to the visit, and expectations on privacy.

Lastly, having an exit strategy and being mindful of the time are common responses received from the physicians. Several physicians have noted keeping track of time via the clock visible on screen or a watch. Moreover, physicians noted that it was important to state at the beginning of the call the length of time the patient has been scheduled for and to explicitly state that there are other appointments booked following the call.

Discussion

Driven by the COVID-19 pandemic, physicians across Canada are ensuring that accessible healthcare is available for their patients through different telemedicine approaches. A recent survey of Canadian family physicians [12] showed increasing uptake of telemedicine with the majority being through a phone call. Telemedicine ensures that patients are receiving timely, comprehensive, accessible and high-quality care. [13] Despite this, there are several challenges that physicians face with the uptake of telemedicine. [12, 14] To our knowledge, this study is the first to examine telemedicine challenges and strategies within the local communities of Morden and Winkler, Manitoba.

Physicians surveyed have raised several challenges related to telemedicine appointments, namely: difficulty staying on time, patient distractions, less privacy, lack of an exit strategy and lack of visual cues which would more significantly impact individuals with disabilities or language barriers. These challenges that physicians in these rural communities are experiencing are like those reported in the academic literature on telemedicine [15] indicating that the limitations of telemedicine are widespread. While not raised in the current study, other researchers have also noted

challenges regarding coordination of investigations or procedures (e.g. bloodwork, physical exams) for which the patient must attend in-person. [16, 17] Other challenges that have been mentioned in the literature include concerns regarding ethics and privacy of confidential information shared via telemedicine visits. [18, 19]

Telemedicine poses unique challenges to both patients and physicians, leading to an increased need to explore solutions that can be put in place to improve and optimize telemedicine visits. Physicians surveyed identified several strategies to address some of the challenges associated with telemedicine appointments. These include scheduling to separate telemedicine vs in-person appointments, technology and equipment, pre-screening questionnaires, patient education, and exit-strategies. These strategies - likely developed through physician trial and error during their experiences using telemedicine are unique to the physician population and context being in two rural Manitoba communities. However, the core issues such as time-efficiency, privacy/confidentiality and patient centered services are relevant to other physicians using telemedicine.

Perspectives gathered through this study are an important first step in providing data for developing greater efficiencies with telemedicine appointments. As a practical approach, clinic managers and/or information technology systems specialists can address the challenges encountered by physicians and map out a better telemedicine implementation plan that incorporates the strategies suggested in this study. In addition, conceptual understanding of the primary challenges with telemedicine can assist in identifying further specific strategic interventions at the local or regional levels.

Conclusions

This study advances the understanding of telemedicine challenges and strategies in two rural Manitoba communities. Telemedicine offers physicians a way to deliver accessible, high-quality care to their patients, especially in rural communities. More efficient, better telemedicine appointments will likely facilitate better physician workflow and better patient satisfaction with care.

Appendix A

1. How long is your average telemedicine appointment?
2. Do you think that your average telemedicine appointment is longer, shorter or about the same compared to an in-person appointment?
3. Are patients less likely to cancel a telemedicine appointment vs an in person appointment?
4. Have there been instances when you found it challenging to stay on time during telemedicine calls?
5. What factors, if any, make it challenging to stay on time during telemedicine calls?
6. What strategies have you used to stay on time during telemedicine calls?
7. Do you have any other suggestions for improving the efficiency of telemedicine appointments?

Appendix B

TELEMEDICINE STRATEGIES

HFTS 2020 PROJECT

75%
"Patients are less likely to cancel phone visits"

95%
"Phone visits are not longer than in-person visits"

Most physicians surveyed agree that telemedicine visits are positively impacting patient care

Over the 8-week period from March to May 2020, phone visits have DOUBLED

Telemedicine can provide rapid, safe, accessible and high-quality care (CFPC, 2020)

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60% of physicians surveyed have found it challenging to stay on time during a phone visit

STRATEGY #1: SCHEDULING

Schedule phone visits together for better flow. For example, not mixed in with in-person visits

STRATEGY #2: EQUIPMENT

Consider using a hands-free device to enable charting during the visit

STRATEGY #3: PRE-SCREENING

Identify which patient concerns can be adequately addressed via a phone visit

STRATEGY #4: EDUCATE

Educate patients on preparing for a phone visit (e.g., privacy, time, writing down specific concerns)

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