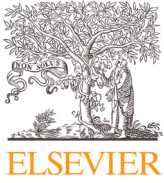




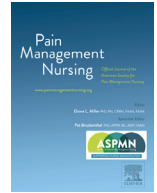
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## Telepain During the COVID-19 Pandemic<sup>☆</sup>

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The COVID-19 pandemic has rapidly changed the way we deliver pain consultation. In person, pain consultation was quickly replaced with telehealth visits in 2020, at one health care facility. The pandemic quickly revealed how pain consultants can utilize telehealth to deliver acute pain consultation in the hospital. The rapid implementation of telehealth pain consults has also revealed many areas for future improvement. The purpose of this article is to describe the successes and challenges of delivering acute pain consultation, via telehealth in the acute care setting.

Patients frequently experience pain during hospitalizations, with one recent study reporting a frequency of up to 77% (Stonski et al., 2019). As a result, many hospitals have developed acute pain management teams. Although, Rockett et al. (2017) found that 84% of hospitals in the United Kingdom had such teams, it is unknown how many U.S. hospitals have acute pain management consultation teams (AHA, 2021). Many professional societies, including The Association of Anesthetists of Great Britain and Ireland, The Royal College of Anesthetists, and the Royal College of Surgeons of England have called for all hospitals to establish Acute Pain Management Teams (APMTs) (Rockett, Vanstone, Chand, & Waeland, 2017). “Even hospital accreditation was linked to establishment of an organized program for the assessment and treatment of pain” (Stamer et al., 2020, p. 652).

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Pain Specialists have been at the forefront of the COVID-19 pandemic (Chan, Lin, George, & Liu, 2020). In January of 2020, whispers of the mysterious respiratory illness began. By March 20, the Minnesota Governor declared a state of emergency, banning all elective surgeries (Suresh, 2021). Despite the surgical ban (in Minnesota), our APMT resources and consultations remained available to all hospitalized patients within our health system. Pain consultation remained vital for patients with COVID-related pain syndromes as well as for patients with non-COVID related pain issues.

To reduce the spread of COVID and to protect providers and patients, providers began to adopt new practices. Thus, the decision to change from in-person visits to telehealth was made rapidly. Virtual care was first adopted in primary care in 2020, and the APMT quickly followed suit. Our ambulatory providers went from conducting about 3,500 virtual care patient encounters in January 2020; to 120,000 in April. For several months in 2020, virtual visits made up about 80% of our ambulatory visit mix. This change happened virtually overnight. Information technology, Acute Care Leadership, Finance, Coding, and Providers worked together to optimize virtual care visits, create resources (including telehealth note templates), and shape the future of video visits at our organization. The foundation was laid for the inpatient providers to adopt telehealth as well.

The APMT consult service continued to ensure appropriate acute pain treatment via telehealth. The adoption of telehealth rapidly changed the way we deliver acute pain consultation in the hospital setting. To help increase communication availability and flexibility for our suspected COVID-19 and confirmed COVID-19-positive patients, a tablet was issued to each appropriate patient that remained in their room. The devices could be called from a desktop video phone, any phone, another iPad, or web browser. A multi-disciplinary team of advanced practice nurses and pharmacists provided the telehealth pain consults via these devices. The APMT consult services experienced challenges and pitfalls associated with the telehealth process.

## Description of APMT and Setting

Our growing inpatient pain management team consists of advanced practice nurses (APRN), pharmacists, and an acupuncturist. The goal of the APMT is to offer a standardized, integrated, and interdisciplinary process and structure for providing pain management consultative services at three large hospitals in Minnesota. The APMT serves a wide spectrum of patients with acute pain (i.e., acute on chronic, malignant, post-operative, neurologic disorders, sickle cell disease, falls or traumas managed nonoperatively, opioid use disorder, substance use disorder, adverse drug reactions due to polypharmacy, and complex medical issues) requiring adjustments to the inpatient pain regimens. Every formal pain consult has a review by an APRN or Clinical Pharmacist during the duration of the active consultation, depending on the patient's unique needs. In short, the APMT members are responsible for management of acute and chronic pain control in the hospital. Pain pharmacists are often responsible for patient and provider education as well as optimizing medication therapy (Phelps et al., 2019). The APMT APRN is responsible for assessment, diagnosis, prescribing of controlled substances, and educating patients. In 2019, before the pandemic, the APMT saw more than 1,570 new consults. In 2020, the inpatient APMT saw fewer total consults (1,290 inpatient pain consults). Cumulatively, the APMT documented 3,720 visits which included a higher number of follow-up visits during the pandemic.

## Telehealth Process

Once the APMT received a consultation for a patient, the APRN reviewed the patient chart and reason for consultation to determine which team members would complete the consult. If the patient was noted to have an active COVID-19 infection the patient would automatically be arranged to have a telehealth consult. Next, the APRN would contact the patient's nurse to set up a video call with the patient by having them prepare and place a camera in the patient's room using a unique and secure patient identifier and PIN (located in the chart). After the nurse, patient, and camera were ready the pain consultant would then login to the secure meeting platform. After the patient or family consented, the visit could begin. Our health system utilizes the EPIC electronic medical record, although Polycom video conferencing was the preferred method of video conferencing in the hospital setting.

## Benefits of Telehealth

Telehealth has been especially useful for several reasons. Telehealth has resulted in social distancing (Farr et al., 2021), improved provider and patient satisfaction (Chaudhry et al., 2021), improved access to care, and may prove to be more efficient than traditional visits.

Initially in the pandemic, the primary benefit of telehealth was the reduction in spread of COVID-19. The required social distancing and scarcity of protective health equipment (PPE) made telehealth very beneficial (Farr et al., 2021). This minimized the risk to the consultant as well as the patient. Another benefit as noted by Silva and Schack (2021) was that patients with cancer benefit from the reduction in exposure to potentially infected hospital staff. This will continue to hold true for other infectious diseases and hospital acquired infections.

Satisfaction is a significant benefit of telehealth. In fact, Chaudhry, Nadeem, and Mundi (2021) found that surgeons and patients were equally as satisfied with telehealth as in-person visits. In their review of 133 published articles, they found no disparity in satisfaction among patients that had telehealth care and those obtaining in-person visits (Chaudhry et al., 2021). Our ambulatory

providers went from conducting about 3,500 virtual care patient encounters in January to 120,000 in April. For several months, virtual visits made up about 80% of our ambulatory visit mix. An August customer survey reinforced our patients' readiness and appetite for virtual care offerings. Our patient satisfaction survey vendor found that 80% of respondents considered themselves likely to use phone visits as part of their health care journey going forward, and 68% indicated the same for video visits. Of respondents ages 65–74, more than two-thirds considered themselves likely to use a video visit. Overall, only 16% of respondents were concerned about their ability to use virtual care technology.

Adequate insurance coverage for the telehealth visits is another advantage. One of the main reasons telehealth has been adopted, seamlessly, is the lack of financial penalty. Medicare's 1135 waiver, does reimburse telehealth at the same amount as the evaluation and management codes (E/M codes) (Wahezi et al., 2020). Additional analysis of private payor data will be required.

Telehealth has also increased access to care across many hospitals while minimizing the risk of spreading infection. Team members of the APMT can see consults all day, across three hospitals, without physically driving across town. This ability to deliver late evening consults via telehealth has streamlined the process of addressing late day consultation requests such as postoperative pain cases that arrive late to the ward.

Our inpatient team has been satisfied with telehealth as it allows providers to work from home. This has minimized drive time for pharmacists and nurse practitioners. With last minute school closures, it was helpful for staff (with small children) to work from home as several schools were completely closed to in-person learning. Most Minnesota schools were open only part time for in-person learning, making full-time employment almost impossible.

The video visits also enable consultants to see patients at more than one hospital, again by minimizing time spent driving, parking, and minimizing exposure to COVID-19. However, some pharmacist are more comfortable with telehealth visits, and others seem to have higher proficiency. The providers that are less comfortable with the technology find that setting up the visit, waiting for the visit can be more time-consuming than driving to multiple sites and walking directly into a room.

## Challenges of Telehealth

Although telehealth has been utilized for years, its utility is not universal. The application of telehealth grew rapidly during the pandemic, although not without drawbacks. General limitations include legal barriers, lack of physical exam capabilities, technology difficulties, and communication barriers.

Unfortunately, telehealth may have some legal pitfalls. For example, not all malpractice insurance plans cover telehealth claims (Farr et al., 2021). Dermatologists have noted this to be a barrier to providing teledermatology (Farr et al., 2021). It is recommended that all providers should verify telehealth consults are covered by their malpractice insurance carrier before conducting any telehealth visits.

Another disadvantage is that telehealth consults do not allow providers to conduct a full physical exam. In the hospital, vital signs and auscultation are documented by the registered nurse and attending physician. However, the telehealth consultant cannot independently conduct a musculoskeletal exam. Wahezi and colleagues (2020) provide a comprehensive framework for musculoskeletal and neurological exams in telehealth. Lack of physical exam is not necessarily a pitfall in the hospital, as many nurses and attending providers are conducting routine examinations, as well. However, when treating conditions such as mouth pain, the cameras are not sharp enough to see the dark oral-pharyngeal mu-

cosa. Providers will need to determine which patients are and are not appropriate for telehealth consultation. Patients with intrathecal pain pumps that require interrogation were not appropriate for telehealth visit.

The technology is not always readily accessible for telehealth visits, which can lead to delays in patient care. In our hospital system, each hospital has been equipped with iPads, although not every room has access to an iPad with each unit having about four tablets for 30 rooms. With the difficulty in finding scarce iPads, consultants making phone calls to the unit to set up the visit, and adjusting and preparing the camera for the patient, our consultants often wait more than an hour before a visit can begin. Loss of battery power is also a common problem. Some e-visits can be interrupted by other providers, physical therapy, or required medication administrations from the nurse. Because the video platform is secure each patient has a unique login to visit with the provider. If the patient's PIN was entered incorrectly at the time of hospital admission, technology support must be enlisted for assistance. Alternatively, if the provider enters the pin incorrectly, the video visit will not be successful. It should be noted that technology and wait times to set up the video visit caused dissatisfaction for providers, pharmacists, and nurses. Additionally, tasks (i.e., who sets up the camera, who is responsible for broken iPads, who charges the iPad's and when) were not clearly delineated. This led to different processes and roles across hospital sites.

As we began to see more patients virtually, there were clear delays in setting up the technology. Some of the most common obstacles when calling for assistance to set up a telehealth visit were: nurses did not have time to help, there were not enough tablets on the units to use, or they did not know how to set this up as they have never done so and haven't had training. This was common at all three of the hospitals that we provide pain consults.

Lastly, not all patients are appropriate for telehealth consultation. Patients that have trouble phonating (i.e., tracheostomy) cannot be interviewed via telehealth. Language adds another barrier to effective communication. Interpreters have not been physically present during the pandemic due to state guidance. It is also difficult to hear an interpreter on telehealth when they are called on a separate line. Patients who lacked access to devices or could not understand the technology were deemed inappropriate for telehealth.

## Conclusions

Telehealth may be a very useful tool when acute pain patients cannot be evaluated face-to-face. Reimbursement has been excellent, patients and providers are satisfied with telehealth, and it appears to increase access to pain consultation resources. However, several drawbacks to telehealth pain consults may need to be perfected in years to come, before pain consult services can be completely delivered in a telehealth format. Regardless of the drawbacks, telehealth will continue to evolve. In fact, national telemedicine programs are being developed worldwide based on their ability to increase access to care (Latifi, Azevedo, Boci, Parsikia, Latifi, Merrell, 2021). Additionally, M Health Fairview has an-

nounced that they will be investing \$598,000 in improving telehealth technology (Siwicky, 2021). Hospital rooms will need to be equipped with video cameras, nurses will require training, and the exact roles/duties will need to be delineated. Distance-based care is here to stay, although it requires ongoing finetuning.

I suggest pain specialists continue to define our virtual care offerings and optimize our processes. Professional societies will need to provide further direction on when virtual care is and is not appropriate. Nursing societies will need to weigh in on the role of the bedside and clinic RNs in virtual care. Payers will need to maintain consistent levels of coverage for video visits. Hospitals will need to invest in the equipment to make virtual care more seamless. Lastly, I recommend more qualitative and quantitative analysis regarding the patients experience while receiving virtual care visits, both in the hospital and in the clinic setting. It is unclear what the balance of in-person and virtual care will look like in the years to come.

## Declaration of Competing Interest

None.

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