Journal of
Anesthesiology and Pain Therapy

Commentary   **Open Access**

Lessons Learned: Inpatient Telepalliative Medicine Consultations during COVID-19 Pandemic

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Article Info

Abstract

As the COVID-19 pandemic proceeds, systems continue to struggle with the need to decrease provider exposure and minimize personal protective equipment use while maintaining high quality patient care. The reduced visitation capacity in hospitals has resulted in high levels of patient and family suffering, and patients both with and without COVID-19 require expert symptom management and goals of care conversations. A manuscript was published describing the rapid implementation of telepalliative medicine consultation by the Inpatient Palliative Care team at UCSF in attempts to meet these critical patient and family needs. This piece details additional lessons learned that were inadequately addressed in the original manuscript and/ or that have been revealed in the months since the program's inception. Key learning points include the need for: committed investment in effective hardware and software; communication skills adapted to effectively utilize technology to benefit patients and families; creative workforce models to render technology effective; interdisciplinary input in care models to reduce provider as well as patient and family suffering; and attention to burdens placed on already overstretched nurses and intensivists during respiratory pandemics.

Inpatient Telepalliative Implementation

This manuscript describes the rapid launching of an inpatient telepalliative consultation program at the University of California, San Francisco (UCSF) following the onset of the COVID-19 pandemic[1]. Following the onset of community spread in San Francisco, UCSF initiated a hospital-wide visitor ban and launched closed COVID-19/respiratory illness units. Providers were encouraged to limit in-person visits to key personnel in an attempt to minimize both provider exposure and use of limited personal protective equipment (PPE). The Centers for Medicare and Medicaid Services rapidly expanded telehealth reimbursement on an emergency basis[2]. Together, these new clinical restrictions paired with financial feasibility prompted the Inpatient Palliative Care team to rethink their model for care delivery. Although telepalliative medicine has been used in many outpatient settings and has been associated with improved health outcomes, the inpatient application of this technology is relatively novel[3-5]. To meet the acute and profound palliative care needs of increasingly isolated patients and families, an inpatient telepalliative program was piloted and launched.

The telepalliative program at UCSF required a number of hardware, software, workforce and workflow innovations. The team acquired 10 donated iPads and accompanying accessories. Zoom videoconferencing software was used as the video platform of choice,

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and electronic medical record templates and sign-out sheets were developed to track hardware and accurately represent and bill for telemedicine work. Interdisciplinary members of the Inpatient Palliative Care team worked with hospital and nursing leadership to design and pilot novel workflows for multiple telemedicine scenarios.

Lessons Learned

The original article describes not only the process of rapid implementation but also key lessons learned[1]. Here, we detail additional lessons that were either inadequately addressed in the original manuscript and/or have been revealed in the months since the program's inception (Table 1).

Technology

A core strength of this telepalliative program was the ability to rapidly launch within weeks due to acquisition of videoconferencing software and mobile hardware in the form of iPads with rolling stands. While some hospitals and closed COVID-19 units are now outfitted with iPads and videoconferencing software in every room, this was not routinely present prior to COVID-19. This manuscript identified core initial technology but did not address the unforeseen supportive technology that has since been needed. In particular, following the initial pilot, issues arose relating to audio quality and volume, as patients or providers were often unable to hear each other in noisy Intensive Care Unit (ICU) settings, where the majority of COVID-19 consultations took place. Further technology was needed to improve hearing for patients (e.g. pocket talkers) and audio quality (e.g. advanced rolling stands with embedded microphones/speakers). Attention to infection control was also required, as some technology and equipment proved challenging to clean regularly in adherence with hospital policies.

New creativity has been needed to position videoconferencing technology proximal to patients in atypical environments. One iPad might need to twist underneath a proned patient in the ICU, as family from around the world keeps vigil; another iPad might extend over a bed and in front of a patient who is hard of hearing and Spanish-speaking to ensure the remote translator and provider can hear his soft voice when he describes his demoralization and pain. Equipment that allows for such flexibility is vital.

Table 1: Recommendations for Inpatient Telepalliative Consultations

Intervention Category	Recommendations
Technology	• Invest in robust hardware and software that is mobile, easy to use, and amenable to routine disinfection • Acquire accessory technology needed to ensure quality audio and video in even the most challenging hospital settings • Identify strategies to seamlessly integrate language translation into video or audioconferencing • Obtain hardware capable of adapting to unique patient and provider set-ups
Communicating Through Technology	• Utilize virtual waiting rooms to facilitate provider pre-meetings • Incorporate a "technological time out" into the virtual pre-meeting to anticipate technological concerns that may arise • Identify a meeting leader and set videoconferencing ground rules (e.g. when to mute and when to speak) prior to starting a meeting • Reference best practices around remote family meetings including: eye contact, avoiding distractions, removing masks when safe[7] • Develop and provide focused training to staff, providers and trainees without experience using this novel form of communication • Study and analyze outcomes around symptom management, patient satisfaction, and effective communication to validate and guide the use of technology in these settings
Workflow	• Adapt standard workflows to the unique needs of each setting and process of care (e.g. ICU vs. medicine floor, symptom assessment vs. goals of care meeting, connecting patients to families vs. connecting patients to providers • Create guidelines to identify when face-to-face interaction is required due to the limitations of telemedicine • Identify who will support family and staff in technological training and set-up, and set aside time in workflow to ensure this is completed • Utilize consultative triggers and proactive palliative care outreach to streamline connection to appropriate care (especially in the ICU) and reduce the burden on primary teams and intensivists
Workforce	• Appreciate the expertise of interdisciplinary team members in designing interventions to reduce patient, family and provider suffering • Acknowledge functional and emotional complexities surrounding remote work, including new burdens placed on providers and issues surrounding hierarchy, privilege and power • Recognize that nursing staff and intensivists have been overstretched during a respiratory pandemic and design workflows that do not overburden these groups

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Communicating Through Technology

In palliative medicine, while organizing a family meeting, attention is given to the pre-meeting and setup. A critical learning point was the importance of enabling the virtual waiting room function offered by many videoconferencing platforms to allow for both a *technological pre-meeting* (in which content similar to a traditional pre-meeting is discussed over videoconference among providers before the patient/family join the conversation) and a *technological time out* (in which key technological concerns are anticipated and discussed).

While many communication skills are universal, some must be adapted to accommodate the limitations of virtual media. Gratefully, much has been published recently around best practices in conducting a virtual visit or family meeting, including physical etiquette (making eye contact, avoiding distractions, removing masks when safe) and technological etiquette (identifying a meeting leader, guiding participants in muting)[6,7]. Often, virtual family meetings require more structure and direction, given the lack of non-verbal cues that normally guide the flow of in-person conversations.

Finally, with a recent renaissance in the use of technological platforms for patient care, there is a growing movement towards and need for assessing validated outcomes. Moving forward, studies describing and assessing telepalliative interventions will be strengthened by the application of quality metrics for symptom management, patient satisfaction, effective communication and goal concordance[8].

Workflow

Although there is no singular successful workflow, the following are key issues that must be considered. First, it is critical to identify situations in which telemedicine is not an adequate alternative to in-person presence. Whether a necessary interventional pain procedure or complicated shared decision-making conversation, some medicine is still best done face-to-face. Second, special attention is needed in each scenario to consider which providers should remain in-person with the patient, who will join remotely, and who will take responsibility for the technological setup that empowers the meeting. Each visit requires that patients, family members, and often providers are trained ahead of time in the technology and workflow. Standardization of common scenarios can vastly ease this burden.

One of the core lessons learned is that nursing staff have been disproportionately burdened by the COVID-19 pandemic, as they have in historical pandemics[9]. Globally, nursing staff (particularly in the ICU) have been heavily impacted by lives lost, workforce shortage, PPE shortage,

and mental health burden[10]. Many sites requesting support during COVID-19 surges identified nursing staff as their most scarce resource. As a result, an initial error of this model was to assign bedside nurses many key tasks in the workflow of an inpatient telepalliative program, including technological set up and routine training of patients and family members. After recognition of this error, this manuscript emphasizes that workflows need to incorporate nursing input and ensure that nurses are not overly burdened given the many other demands on their time.

This paper could be strengthened by further describing novel workforce models. This requires creative thinking, including possibly utilizing volunteer services or displaced trainees to meet these new demands. For example, inpatient team members may rotate roles, hospitals may invest in a new workforce of dedicated patient coordinators, or providers working in areas on hold (e.g. in operating rooms) might be repurposed. Further studies describing and analyzing these and other models will be welcomed by the medical community.

Proactive palliative care outreach, with the use of consultative triggers, especially in the ICU setting, could help to streamline connection to appropriate care, and reduce the burden on primary teams and intensivists[11,12].

Workforce

Given the high burden of psychosocial and existential suffering during this pandemic, compounded by the anxiety and loneliness resulting from visitor restrictions, interdisciplinary providers including nurses, social workers and chaplains have been disproportionately called upon for patient, family and colleague support[13]. Interdisciplinary providers have also been asked to expand or redefine work roles, often without support or awareness of impact. Workflow innovations must therefore be established with the input of all team members in order to harness the expertise of all disciplines, and ensure no specialty is overburdened. Telepalliative interventions, if designed with full interdisciplinary input, have the potential to reduce patient and family suffering related to isolation, without overwhelming providers.

Additional functional and emotional complexities arise when some providers work remotely while others remain on-site. Some of these differences result from personal choice, but many are related to the intrinsic demands that healthcare places on different individuals. For example, inpatient providers have been far less able to minimize face-to-face contact than outpatient providers, and many specialties are disproportionately impacted. Those working remotely may report grief at being separated from their teams and patients, as well as the burdens of home-based distractions, lack of work-life

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separation, and ergonomic hinderances. Those working in-person may feel unfairly placed at risk or recognize disproportionate treatment. Issues around workflow and workforce bring to light layered concerns about hierarchy, privilege and power. Humility, kindness, communication and acknowledgement are critical practices in these charged times.

Conclusion

Hospitals need to invest in all pillars of this novel approach to care, including technology, communication, workforce and workflow. As with any revolutionary model in any sector, healthcare must invest in multiple dimensions in order to ensure success. If a table is to withstand weight, it must retain all its legs. If our systems invest only in telemedicine software and neglect the personnel required to support and train providers and patients or neglect the hardware that renders the software usable, then we only pursue this new model half-heartedly and without the backbone to succeed.

Conflict of Interest

The authors have no conflicts of interest to declare.

Funding

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