

Telemedicine in Providing Palliative Care to Cancer Patients

Subjects: Critical Care Medicine

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Telemedicine, or the use of telecommunications to provide health services, is a technology that has been long studied to help increase access to health care.

Keywords: telemedicine ; palliative care ; pain management

1. Introduction

Its origins can be traced back to the United States (U.S.) Civil War, in which the telegraph was used to help transmit the medical supply needs of soldiers in the field ^[1]. Early mentions of the potential of telemedicine providing remote care are seen in a case report in the Lancet 1879, in which a physician provided care to an infant with the use of a phone ^[2]. As the technology grew, the vast potential of telemedicine took form. Willem Einthoven (1860–1927), a Dutch physician, transmitted heart sounds with the use of a galvanometer and the emerging telephone in 1905 ^[3]. In 1920, one of the first documented uses of telemedicine by a service occurred at Haukeland Hospital in Norway, in which radio links were used to provide health care support to ships at sea ^[4]. From its infancy to today, the potential and use of telemedicine has grown dramatically.

The current landscape of health care delivery changed due to the emergence of coronavirus disease 2019 (COVID-19). Healthcare providers encountered unprecedented challenges in providing care to patients. This included the need to accommodate social distancing, caring for those in the hospital who are most vulnerable to communicable diseases and providing support to families who cannot be with their sick loved ones ^{[5][6][7]}. In addition, health care systems worldwide have been under tremendous strain due to the increasing number of patients with COVID-19 ^[8]. Telemedicine has emerged as a platform to provide care for patients while helping to ensure social distancing not only among patients, but also between patients and medical teams ^[8]. During the first quarter of 2020 in the U.S., the number of telehealth visits increased by 50% compared to the same months the prior year ^[9]. When the Center for Medicare and Medicaid Services telehealth waivers went into effect early in March of 2020, there was a 154% increase in telemedicine visits as compared to the same period in 2019 ^[9].

Palliative and supportive care programs worldwide have played a vital role in the COVID-19 pandemic response. Many programs have utilized telemedicine to help continue providing support to patients, families, caregivers, and treating teams ^[6]. This health care delivery platform allows continuity in providing effective symptom management, addressing goals of care, and conducting family meetings in a time where not all involved can be physically present together ^[6]. Despite the great promise that telemedicine has in palliative medicine, there are challenges ahead. For instance, there are barriers to telemedicine implementation, including resource-limited settings, and healthcare and health literacy disparities among different populations ^{[8][10][11]}.

2. Benefits of Telemedicine in the Care of Patients with Advanced Cancer

There are numerous reported benefits of telemedicine in the care of patients with advanced cancer ^[12]. These include overall improved access to interdisciplinary oncological and palliative care and increased patient satisfaction ^[13]. Patients can have access to the oncologist and other subspecialties, along with members of the multidisciplinary team such as dietitians, social workers, and counselors. The patients can be in one location and access multiple services, reducing significant travel time and cost. This improved access to care in rural populations is especially remarkable. They often have poor access to timely healthcare, are diagnosed with cancer in later stages, with limited access to palliative care teams, and have higher cancer-related mortality. ^[12] Telemedicine can also improve treatment adherence, improve continuity, enhance communication, and allow rural patients to participate in clinical trials. Telemedicine can significantly reduce missed appointments among advanced cancer patients ^[14]. Minimizing “no-shows” or missed palliative care

appointments in advanced cancer patients is essential, as many patients visit emergency rooms in the subsequent two to four weeks ^{[12][15]}. Advanced cancer patients receiving palliative care often have a poor performance status, are approaching the end of life, use assistive devices, and rely on a caregiver to transport them to their appointments. Patients with elevated symptom distress can receive a high-quality assessment and management of symptoms from the comfort of their home using telemedicine, rather than making an arduous trip to the clinic and facing significant challenges in receiving similar assistance ^[16]. Caregivers can join telemedicine visits even when not present with the patient, allowing care to be more patient and family-centered. Moreover, telemedicine can help family caregivers maintain their employment and avoid financial implications by decreasing the number of missed workdays needed to accompany their loved ones to in-person appointments. There are also substantial cost savings associated with telemedicine for advanced cancer patients, their families, and health care systems ^[17]. Telemedicine can also help facilitate collaboration between the specialty oncology and palliative care services and local primary care providers, improving overall patient care ^[18].

While many aspects of telemedicine may serve as a challenge to the demonstration of empathy by a provider, there are many opportunities that may develop to help foster better knowledge and understanding of the patient. Gurp et al. set out to explore the role that telemedicine can have in facilitating relationships and fostering empathy through exploring palliative care outpatients' views ^[19]. In their interviews, patients felt that telemedicine brought about a new level of intimacy into the patient–physician relationship, as the physician could now have a view into the personal environment of the patient ^[19]. They felt that verbal and non-verbal signals could also add to empathy via telemedicine ^[19]. It allowed for visits to those who could not leave their beds due to weakness and broke down barriers of distance that existed in the past ^[19]. Along with appropriate webside manner (**Table 1**), these other benefits of telemedicine can add to the demonstration of empathy from the physician during their encounters.

Table 1. Key Elements and Components of Webside Manner Skills.

Key Element	Components
Proper set up	Quiet environment with minimal potential for disruptions Professional backdrop
	Test platform before first virtual visit
	Body position
	Neutral relaxed posture
	Head and one-third of upper torso should be visualized
	Maintain eye contact
	Camera at eye level
Acquainting the participant	Situate patient's onscreen image adjacent to the camera
	Wave hello at the start of the visit
	Name the dilemma with the participant
	New or awkward format
Maintaining conversation rhythm	Unexpected disruptions and ambient noise may occur
	Check in: "How can I make this experience better?"
	Avoid prolonged silence. Thoughtful brief pauses are favored. Minimize overtalking
Responding to emotion (e.g., sadness)	Avoid saying "mm-hmm." Gently nod instead.
	Focus on verbal responses "I wish." "Take your time. I am here." Consider nonverbal responses
	Lean in slightly to convey intentional listening
	Nod gently
	Place hand over heart to convey empathy

Key Element	Components
Other considerations	Use phone when there are:
	Persistent technical difficulties
	Participants who either do not have access to the requisite technology or find the virtual visit platform too technically challenging to navigate
	Patients who are too ill to participate
Closing the visit	Non-English-speaking patients who require interpreters: Consider using a virtual visit platform that possesses interpreter services, or use the video platform to visualize the patient and use a separate interpreter phone service for audio
	Summarize the visit
	Verify participant understanding
	Provide opportunity for the participant to voice thoughts, questions, or concerns
	Outline next steps based on goals of care conversation

* This table was obtained from reference ^[20], Chua et al., with copyright permission from Mary Ann Liebert, Inc. Publishers.

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