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**Brief Report**

# Implementation of a Palliative Hospital-Centered Spiritual and Psychological Telehealth System During COVID-19 Pandemic



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**Abstract**

**Background.** The severity of the COVID-19 pandemic has resulted in limited provision of palliative care and hospital teams have had to rise to the challenge of how to deliver care safely to people with palliative needs. Telehealth interventions have been seen as a useful resource with potential to improve clinical effectiveness.

**Objective.** To describe the implementation of a spiritual and psychological palliative telehealth system during the pandemic.

**Methods.** Pilot study based on the implementation of a telehealth system designed to support hospitalized patients referred to a mobile palliative care team, through synchronic videoconferences, and including patients' relatives. The implementation included protocol development, physical infrastructure, and training. The intervention consisted of spiritual and psychological telehealth sessions performed remotely by the chaplain and psychologist of a palliative care team.

**Results.** During the study period 59 patients were recruited, median age of 70 years, 57.6% females. The primary diagnosis was severe COVID-19 (50.8%), advanced cancer (32.2%) and advanced chronic illness (16.9%). A total of 211 telehealth sessions were carried out, 82% psychological and 18% spiritual. The main criteria for psychological sessions were being related to seriously ill patients with withdrawal or withholding of life-support treatment (60.1%). The main criteria for spiritual sessions were being a patient with spiritual suffering or requesting spiritual assistance (73.6%). An electronic user satisfaction survey indicated high satisfaction rates.

**Conclusion.** This report demonstrates that it is possible to provide spiritual and psychological palliative care to hospitalized patients and families during pandemic restrictions through interdisciplinary telehealth delivery. *J Pain Symptom Manage* 2021;62:1015–1019. © 2021 American Academy of Hospice and Palliative Medicine. Published by Elsevier Inc. All rights reserved.

**Key Words**

*Terminal care, spiritual care, psychological care, hospital care, COVID19, supportive care*

**Introduction**

The severity of the COVID-19 pandemic has resulted in limited provision of palliative care (PC) worldwide.<sup>1</sup> Hospitals have had to adapt health care service delivery by prioritizing critical care interventions aimed at

saving people's lives. PC teams have had to rise to the challenge of how to deliver hospital-centered care safely to people with palliative needs.<sup>2</sup> Telehealth has been widely recommended as an alternative to overcome pandemic health provision restrictions,<sup>3</sup> and

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palliative telehealth has been seen as a feasible and useful resource with potential to improve clinical effectiveness.<sup>4</sup>

Hospital PC uses an interdisciplinary approach to improve the quality of life of patients and families facing challenges associated with life-threatening illness.<sup>5</sup> Patients facing severe COVID-19 are exposed to high symptom burden, difficult decision-making, and end-of-life isolation.<sup>6</sup> Numerous heartbreaking stories have appeared in the media about patients dying alone, with loved ones denied permission to visit.<sup>7</sup> Interdisciplinary PC teams are trained to address this suffering through emotional and spiritual support and compassionate family communication. The roles of psychologists and chaplains are fundamental to carry out these palliative interventions.

Our main objective is to describe the implementation of a hospital-centered spiritual and psychological palliative telehealth system (PTS) during the pandemic. User satisfaction assessment was incorporated as a secondary objective.

## Methods

This pilot study is based on the implementation of a spiritual and psychological PTS to support hospitalized patients referred to a mobile palliative care team (PCT), including patient relatives.

The PCT works across services in a 500-bed academic hospital and is composed of two physicians, one nurse, one psychologist, and one chaplain. During the pandemic, the PCT chaplain and the psychologist worked remotely. Implementing the PTS involved protocol development, physical infrastructure and training.

The protocol development included definition of the intervention, inclusion and exclusion criteria, identification of PCT member roles, and coordination of procedures.

**The intervention:** spiritual and psychological PTS.

*Spiritual PTS:* spiritual dialogue, joint prayer and virtual religious rites performed by the PCT chaplain.

*Psychological PTS:* active listening, psychosocial risk-factor assessment<sup>8,9</sup> and emotional support, based on the psychological first aid intervention model<sup>10</sup> and performed by the PCT psychologist.

**Inclusion criteria for patients' spiritual PTS:** presence of spiritual suffering or request for spiritual assistance.

**Inclusion criteria for patients' psychological PTS:** recent life-limiting illness diagnosis disclosure or presence of severe psychological symptoms.

**Inclusion criteria for relatives' spiritual or psychological PTS:** relation to a seriously ill patient with

withdrawal or withholding of life-sustaining treatment, or to a patient at the end of life.

**Exclusion criteria:** cognitive or communicational impairment, severe enough to obstruct voluntary participation in a video conference.

## *PCT Member's Roles and Sequence of Procedures*

Physicians performed regular multidimensional palliative assessments of all patients referred during the study period. This evaluation included at least one meeting with the treating medical team to coordinate information delivery and definition of therapeutic plans with the patient and their family, considering the communicational difficulties inherent in the restriction of family visits to the hospital. Subsequently, the PCT determined whether the patient and family met the inclusion or exclusion criteria for PTS.

The nurse asked potential participants for informed consent and, after written agreement, electronically scheduled the PTS sessions with the psychologist and/or chaplain, using a video conference platform system. The same PCT nurse participated in patients PTS sessions, supporting the use of electronic devices and assessing the emotional status of the patients during and after the sessions.

The relatives' spiritual and psychological PTS sessions were performed independently, as scheduled by the nurse, using their own electronic devices and internet connections.

## **Physical Infrastructure**

Electronic devices: two ipads and two smartphones with camera and audio system.

Hospital wireless broadband internet connection.

## **Training**

PCT members were trained in the use of video conference systems (Zoom or Whatsapp).

Physicians and the nurse were trained in the manipulation of electronic devices to avoid healthcare-associated infections.

## *Assessing the Intervention*

The nurse registered information on each PTS session in an electronic and anonymous database, including gender and age of participants, patient diagnosis, referral service, inclusion criteria, session duration, quality of video/audio and limitations.

User satisfaction was measured through a voluntary self-administered electronic survey, which included technical and personal-assessment questions.

Data were analyzed descriptively using percentages and categorized according to the type of PTS performed.

This study was approved by the Institutional Research Ethics Committee.

## Results

From May 11 to September 11, 2020, 190 patients were referred to the PCT team: 84 (44.2%) met the inclusion criteria and 59 (70.2%) accepted to participate (Table 1). The main reason for rejecting was patient perception that psychological or spiritual support was unnecessary. Referrals came from critical care units (66%), internal medicine (22%) and emergency (12%).

A total of 211 PTS sessions were carried out, 82% psychological and 18% spiritual. The number of patient and relative PTS sessions was 65 (30.8%) and 146 (69.2%), respectively (Table 1).

Of the 173 psychological sessions, 79.8% were performed with relatives. The main criteria for psychological PTS were being related to seriously ill patients with withdrawal or withholding life-support treatment (60.1%).

Of the 38 spiritual sessions, 78.9% were performed with patients. The main criteria for spiritual PTS were being a patient with spiritual suffering or requesting spiritual assistance (73.6%).

User satisfaction surveys were obtained from 47.8% of sessions; responders were mainly relatives (68%). The quality of audio and video images was rated as good or very good in 89% and 92% of sessions, respectively. Of the users, 100% indicated they would use the PTS again, 98% would recommend it to others, and 93% agreed or strongly agreed with the statement: "The PTS helped me to better cope with the serious-illness situation that I had to experience" (Appendix 1).

There was no candidate who was left out due to technological difficulty or lack of electronic devices. Limitations identified in 5 % of sessions were interruption due to episodic loss of internet signal (3 sessions), lack of availability of internet connection (2 sessions), audio or video difficulties (5 sessions).

## Discussion

In this cross-sectional study at a single academic medical center, we found implementation of a spiritual and psychological palliative intervention via telehealth produced a high percentage of acceptance (70.2%). The main intervention was psychological support to relatives of severely ill patients with withdrawal or withholding of life-sustaining treatment (60.1%).

The main patient intervention was remote spiritual support (78.9%). This study was performed in Latin

Table 1  
Patient Baseline Characteristics and Palliative Telehealth Sessions Description

All patients, n (%)	Total	Psychological PTS	Spiritual PTS
	59 (100) <sup>a</sup>	49 (83.1)	23 (39.0)
Age median (range), yrs	71 (21-96)	74 (21-91)	66(21-96)
Female Sex, n (%)	34 (57.6)	29 (59.2)	8 (34.8)
<b>Main diagnosis</b>			
COVID-19 severe illness diagnosis n(%)	30 (50.8)	24 (49.0)	12 (52.2)
Advanced cancer n(%)	19 (32.2)	16 (32.7)	6 (26.0)
Advanced chronic non oncologic illness n(%)	10 (16.9)	9 (18.4)	5 (21.7)
<b>All telehealth sessions, n (%) #</b>	211 (100)	173 (82)	38 (18)
Number of patients sessions, n (%)	65 (30.8)	35 (20.2)	30 (78.9)
Number of sessions by patient, median (range)	2 (1-9)	3 (1-9)	2 (1-4)
Number of relatives sessions, n (%)	146 (69.2)	138 (79.8)	8 (21.1)
Number of sessions by relative, median (range)	2 (1-22)	2 (1-22)	1 (1-2)
Sessions duration median (range), min	40 (14-110)	40 (15-110)	30 (14-70)
Video platform of choice Zoom n (%)	119 (56.4)	113 (65.3)	6 (15.8)
Whatsapp n (%)	78 (37.0)	51 (29.5)	27 (71.1)
Other n (%) <sup>b</sup>	14 (6.6)	9 (5.2)	5 (13.1)
<b>Inclusion Criteria, n (%)</b>	211 (100)	173 (100)	38 (18)
Patient with recent life-limiting illness diagnosis disclosure	17 (8.1)	17 (9.8)	—
Patient with severe psychological symptoms	15 (7.1)	15 (8.7)	—
Relative of a seriously ill patient with withdrawal or withholding of life-sustaining treatment	111 (52.6)	104 (60.1)	7 (18.4)
Relative of patient at the end of life	40 (19)	37(21.3)	3 (8.0)
Patients spiritual suffering	14 (6.6)	—	14 (36.8)
Patients request for spiritual assistance	14 (6.6)	—	14 (36.8)

PTS = Palliative Telehealth Sessions.

<sup>a</sup>The patient percentages add up to 100% because of 13 cases that accepted psychological and spiritual assistance.

<sup>b</sup>The platform information was missed in three spiritual sessions and four psychological sessions.

America, and as recently reported, palliative Latin American patients considered themselves to be strongly spiritual and religious. Spiritual support is described as a resource that helps patients deal with severe illnesses and correlates with reduced emotional distress and positive coping strategies.<sup>11-13</sup> The severely ill patients recruited in this study experienced spiritual needs, probably dramatically exacerbated by the forced isolation. Therefore, providing virtual spiritual support at the end of life appears as a meaningful and viable alternative, although still scarcely explored. The use of electronic devices for end-of-life interventions has previously been little explored due to the perceptions of risk of losing the warmth and respect for privacy typically attributed to palliative care as a holistic discipline. However, we observed high acceptance and user satisfaction with the PTS, which was encouraging considering the ongoing needs to develop effective PC interventions adapted to the evolving sanitary emergency.

The audio and video technical evaluation of the PTS was excellent according to the satisfaction survey. The limitations reported were isolated and related to problems with the internet signal. This point is important, since the availability of high-quality internet is essential to achieve successful telemedicine interventions and

could be a limitation. Also, the patients' PTS was always mediated by a nurse, which may constitute a limitation in settings with critical and scarce human resources.

More research is required to evaluate whether telehealth interventions achieve the benefits in patients' quality of death, or in relatives' mental health over the long term, including, for example, a lower incidence of mood disorders, post-traumatic stress disorders or complicated grief. It would also be relevant to assess the impact of palliative telehealth interventions in diverse cultural contexts, different clinical settings, and after the pandemic has been controlled.

### Conclusion

This report demonstrates that it is possible to provide spiritual and psychological palliative care to hospitalized patients and their families during pandemic restrictions through interdisciplinary telehealth delivery.

### Disclosures

There are no conflicts of interest or financial support related to this manuscript.

### Appendix 1. User Satisfaction Electronic Survey. Total of sessions evaluated N = 101

User, %	Patient 32	Relative 68			
Type of telehealth session, %	Psychological 88.1	Spiritual 11.9			
Would I use the telehealth service again?, %	Yes 100	No 0			
Would you recommend someone else to use the telehealth service?, %	Yes 98	No 2			
Regarding the audio quality, %	Very bad 2	Bad 0	Adequate 8.9	Good 31.7	Very good 57.4
Regarding the video image quality, %	Very bad 1	Bad 0	Adequate 6.9	Good 26.7	Very good 65.3
Do you feel that telehealth service helped you to better cope with the serious-illness situation that you had to experience?, %	Strongly disagree 5	In disagreement 0	Indeterminate 2	Agree 18.8	Strongly agree 74.3
Regarding the telehealth sessions duration, %	Little 5.9		Adequate 94.1		Excessive 0

## References

1. The Lancet. Palliative care and the COVID-19 pandemic. *Lancet* 2020;395:1168.
2. World Health Organization. Providing palliative care during the COVID-19 pandemic experiences from Spain 2020. Available at: <https://www.euro.who.int/en/countries/spain/publications/providing-palliative-care-during-the-covid-19-pandemic-experiences-from-spain-2020-produced-by-who/europe>. Accessed March 5, 2021.
3. Jordan V. Cochrane Corner: Coronavirus (COVID-19): remote care through telehealth. *J Prim Health Care* 2020;12:184–185.
4. Ritchey KC, Foy A, McArdel E, Gruenewald DA. Reinventing palliative care delivery in the Era of COVID-19: how telemedicine can support end of life care. *Am J Hosp Palliat Care* 2020;37:992–997.
5. World Health Organization. Palliative Care. Available at: <https://www.who.int/news-room/fact-sheets/detail/palliative-care>. Accessed March 5, 2021.
6. Lovell N, Maddocks M, Etkind SN, et al. Characteristics, symptom management, and outcomes of 101 patients with COVID-19 referred for hospital palliative care. *J Pain Symptom Manage* 2020;60:e77–e81.
7. Burke D. Coronavirus preys on what terrifies us: dying alone. Available at: <https://www.cnn.com/2020/03/29/world/funerals-dying-alone-coronavirus/index.html>. Accessed March 5, 2021.
8. Wakam GK, Montgomery JR, Biesterveld BE, Brown CS. Not dying alone - modern compassionate care in the Covid-19 pandemic. *N Engl J Med* 2020;382:e88.
9. Wallace CL, Wladkowski SP, Gibson A, White P. Grief during the COVID-19 pandemic: considerations for palliative care providers. *J Pain Symptom Manage* 2020;60:e70–e76.
10. Shah K, Bedi S, Onyeaka H, Singh R, Chaudhari G. The role of psychological first aid to support public mental health in the COVID-19 pandemic. *Cureus* 2020;12:e8821.
11. Choumanova I, Wanat S, Barrett R, Koopman C. Religion and spirituality in coping with breast cancer: perspectives of Chilean women. *Breast J* 2006;12:349–352.
12. López-Sierra HE, Rodríguez-Sánchez J. The supportive roles of religion and spirituality in end-of-life and palliative care of patients with cancer in a culturally diverse context: a literature review. *Curr Opin Support Palliat Care* 2015;9:87–95.
13. Delgado-Guay MO, Palma A, Duarte E, et al. Association between Spirituality, Religiosity, Spiritual Pain, Symptom Distress, and Quality of Life among Latin American Patients with Advanced Cancer: A Multicenter Study. *J Palliat Med* 2021;13. <https://doi.org/10.1089/jpm.2020.0776>. In press.