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COVID-19 Articles Fast Tracked Articles

Proactive Identification of Palliative Care Needs Among Patients With COVID-19 in the ICU



Laura A. Schoenherr, MD, Allyson Cook, MD, Sarah Peck, MSW, Jessica Humphreys, MD, Yuika Goto, MD, Naomi T. Saks, MA, MDiv, BCC, Lindsey Huddleston, MD, Giovanni Elia, MD, and Steven Z. Pantilat, MD Division of Palliative Medicine (L.A.S., A.C., J.H., Y.G., N.T.S., G.E., S.Z.P.), Department of Medicine, University of California, San Francisco (UCSF), San Francisco, California; Division of Critical Care Medicine (A.C., L.H.), Department of Anesthesia, University of California, San Francisco (UCSF), San Francisco, California; and Division of Palliative Medicine (S.P.), Department of Social Work, University of California, San Francisco (UCSF), San Francisco, California, USA

Abstract

In the setting of the coronavirus disease 2019 (COVID-19) pandemic, new strategies are needed to address the unique and significant palliative care (PC) needs of patients with COVID-19 and their families, particularly when health systems are stressed by patient surges. Many PC teams rely on referral-based consultation methods that can result in needs going unidentified and/or unmet. Here, we describe a novel system to proactively identify and meet the PC needs of all patients with COVID-19 being cared for in our hospital's intensive care units. Patients were screened through a combination of chart review and brief provider interview, and PC consultations were provided via telemedicine for those with unmet needs identified. In the first six weeks of operation, our pilot program of proactive screening and outreach resulted in PC consultation for 12 of the 29 (41%) adult patients admitted to the intensive care unit with COVID-19 at our institution. Consultations were most commonly for patient and family support as well as for goals of care and advance care planning, consistent with identified PC needs within this unique patient population. J Pain Symptom Manage 2020;60:e17-e21. © 2020 American Academy of Hospice and Palliative Medicine. Published by Elsevier Inc. All rights reserved.

Key Words

Palliative care, critical care (ICU), screening criteria, triggers, COVID-19

Introduction

Although the value of palliative care (PC) is well established, not all patients who can benefit from such services receive them. PC teams have used a variety of strategies to identify and address unmet needs, including consult triggers, risk scores, and electronic clinical decision-making support.^{2,3} After the emergence of the coronavirus disease 2019 (COVID-19) pandemic in early 2020, substantial and urgent PC needs were identified in this unique patient population, particularly within the emergency department and intensive care unit (ICU). 4-6 In response, our institution rapidly piloted a novel system to proactively identify and meet the PC needs of patients with COVID-19 being cared for in our hospital's ICUs.

Address correspondence to: Laura A. Schoenherr, MD, Department of Medicine, University of California, San Francisco, 533 Parnassus Avenue, Box 0125, San Francisco, CA 94143, USA. E-mail: laura.schoenherr@ucsf.edu

Identification of Need

The PC needs of patients with COVID-19 and their families are distinct and significant. The acute and uncertain nature of their critical illness trajectory creates a heightened need for support for goals of care (GOC) and advance care planning conversations. Hospital visitor restrictions and provider safety precautions result in patient distress from isolation, and the absence of loved ones and surrogate decision makers at the bedside results in complicated communication challenges for teams and in distress for family members struggling to support patients remotely. Simultaneously, providers working in the setting of a surge have markedly decreased bandwidth to solicit consultant support. Together, these conditions risk

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critical PC needs going unmet under a traditional referral-based consultation system. As providers nationally and locally gained experience caring for patients with COVID-19, there was a growing recognition that the traditional model for PC consultation was inadequate. The high levels of patient and family need and surge-related stresses on our delivery systems required a more proactive approach to delivering PC.

Implementation

In response to this need, our team worked with hospital and ICU leadership to pilot a proactive intervention to screen all patients with COVID-19 admitted to the ICU and offer PC consultation when indicated. Each morning a designated PC provider reviewed a list of patients with COVID-19 in the hospital, highlighting those cared for in the ICU. The provider then screened each of these patients for unmet PC needs through a combination of chart review and informal discussions with the bedside nurse and primary critical care provider. When unmet needs were identified, the PC provider offered and advocated for consultation by our transdisciplinary PC team. Consultations were only initiated if approved by the primary team.

The four attending physicians who screened patients during the first six weeks of the pilot's operation did so without an explicit guide. However, when informally surveyed about criteria they used, common themes emerged (Table 1). During chart review, providers identified markers of clinical deterioration and complexity and screened for documentation of GOC conversations and patient and family support. When speaking with the bedside nurse and critical care provider, PC providers discussed expected clinical trajectory, clarity of goals, and congruence of goals with anticipated patient outcome. They also explored the complexity and intensity of patient and family support, screening for risk of spiritual and existential distress, trauma, and complicated grief. Providers were more likely to advocate for a PC consultation if the patient's clinical status were deteriorating, if major medical decisions were anticipated, if no surrogate decision maker was identified, if goals were unclear or incongruous with expected clinical trajectory, if additional support was needed for the patient and/or family, or if complicated communication challenges were identified (e.g., language barrier, loved ones located dispersedly and/or outside the country, large or complex family structure).

As is our usual PC practice, consults for patients with COVID-19 in the ICU were tailored to the unique needs of each patient, family, and team. Distinct from standard practice, however, all consults for patients

with COVID-19 were performed via telemedicine in an effort to preserve our hospital's personal protective equipment and minimize provider exposure. Using a combination of existing in-room technology and 10 iPads donated to our service at the outset of the pandemic, Zoom videoconferencing software was used to connect our team with our patients and their families and, often more importantly, to connect our patients to their loved ones directly.⁸

Outcomes

In the first six weeks of our team's pilot (March 30, 2020-May 10, 2020), all 29 of the adult patients with COVID-19 cared for in our hospital's ICUs were screened by our team. Of these, 12 patients (41%) were found to have unmet needs and received formal PC consultation. The most common reasons for consult (more than one could be selected per patient) were patient/family support (n = 9, 75%), GOC and advance care planning (n = 4; 33%), and much less commonly nonpain symptom management (n = 1;8%). Although care planning is always a common reason for consultation, other symptom management (n = 8; 36%) and pain management (n = 7; 32%)were more prevalent during the same six-week period in 2019. Although the sample sizes are small, these differences highlight the particularly acute needs for patient and family support and GOC within the COVID-19 patient population and should inform interventions designed in response (Table 2).

Lessons Learned

Although our pilot was developed to make PC consultation more systematic and less reliant on the practice patterns of individual providers, its success was nonetheless deeply dependent on the interpersonal relationships between the PC and critical care teams. Before starting a similar program, teams should identify key stakeholders in both clinical areas to review the intervention's goals and tailor its implementation to the cultural norms and clinical needs of their institution. It is important to recognize that critical care providers may not be accustomed to outreach from consultant teams and may find it forward, unnecessary, or a critique of their skills. We found it critical to convey respect for the primary team's expertise and ability to build relationships effectively with patients and families, while highlighting our role as an ally hoping to ease the burden on their team during busy times. Because the system is reliant on frequent communication with the primary team, it is helpful to identify a point person on the critical care team for these discussions (ideally the supervising attending

 ${\it Table~1}$ Common Criteria Used to Screen Patients With COVID-19 for Unmet PC Needs

Type of Screen	Content Reviewed or Asked About	Example Questions	Interpretation
Chart review	Comorbidities	N/A	Greater number of comorbidities or the presence of comorbidities known to portend poor prognosis in COVID-19 made provider more likely to advocate for PC consult
	Oxygen support (absolute level and trends over time)	N/A	Higher absolute support or escalating needs suggested that patient may be peri-intubation, which made provider more likely to advocate for PC consult
	Creatinine (absolute level and trends over time)	N/A	Used as a proxy for disease severity, with a higher absolute value and/or upward trend making provider more likely to advocate for PC consult
	Number of consult services involved in care	N/A	Used as a proxy for case complexity; more consultants involved made provider more likely to advocate for PC consult
	Social work and spiritual care notes	N/A	Reviewed to better understand current patient/family support interventions and patient/family values; provider more likely to advocate for PC consult if gap identified between current level of support and patient/family needs
	GOC/ACP notes, progress notes	N/A	If GOC not documented at all or seemed inadequately addressed, provider would then ask bedside nurse and/or primary provider whether this reflected lack of conversations or merely documentation
Discussion with bedside nurse and/or primary team	Family outreach, involvement, & dynamics	 How often has the team been contacting the patient's family? Have there been challenges in communicating with the patient/family? If so, what have these been? Have there been differences in opinion among family members or between a family member and the patient? 	If primary team not already in close, regular contact with family or if disagreement among family members or communication challenges were identified, provider was more likely to advocate for PC consult
	Clinical trajectory	 How has the patient's condition changed recently? Do you anticipate a major medical decision (e.g., whether to intubate, whether to start dialysis) needing to be made soon? 	If worsening clinical status and especially if major branch point ahead (e.g., peri-intubation), provider more likely to advocate for PC consult
	Surprise question ¹²	 Are you worried the patient will die during this hospitalization? 	If team indicated concern that patient may die this admission, provider more likely to advocate for PC consult
	Surrogate decision maker	 Do you know who the patient would want you to consult for medical decisions if they were unable to make decisions on their own? 	If not known to primary team, provider more likely to advocate for PC consult
	GOC	 How well do the patient/family understand the patient's severity of illness? Do you have a sense of what the patient/family are hoping for? Do you sense a disconnect between the patient/family's goals and what can reasonably be expected from available medical care? 	If not clear or incongruous with expected clinical trajectory, more likely to advocate for PC consult

 $COVID-19 = coronavirus \ disease \ 2019; \ PC = palliative \ care; \ N/A = not \ applicable; \ GOC = goals \ of \ care; \ ACP = advance \ care \ planning.$

physician) and to ascertain their preferred method for communication (pager, cell phone, etc.) each time a new provider assumes care.

Initially, our providers screened patients for PC needs without a rubric for how to do so. Here, we offer

some of the commonly used criteria (Table 1) that add to the existing literature on potential triggers for PC consultation unique to COVID-19.¹⁰ To ensure consistency, teams could use these resources to create a guide for providers screening patients for unmet

 ${\it Table~2}$ Comparison of Reason(s) for Consult Between ICU Patients With COVID-19 Seen in First Six Weeks of Proactive Outreach and all ICU Patients Seen During the Same Period in the Previous Year

	ICU Patients With COVID-19 Seen by PC	ICU Patients Seen by PC March 30, 2019—May 10, 2019; $n = 22$ (%)
Reason(s) for Consult	March 30, 2020–May 10, 2020; $n = 12$ (%)	
Support for patient/family	9 (75)	12 (55)
GOC/ACP	4 (33)	18 (82)
Other symptom management	1 (8)	8 (36)
Pain management	0 (0)	7 (32)
Comfort care	0 (0)	4 (18)
Transfer to comfort care bed	0 (0)	2 (9)
Withdrawal of interventions	0 (0)	0 (0)
Hospice referral/discussion	0 (0)	0 (0)
No reason given	0 (0)	0 (0)
Other	0 (0)	0 (0)

ICU = intensive care unit; COVID-19 = coronavirus disease 2019; PC = palliative care; GOC = goals of care; ACP = advance care planning. Data are presented as number (percentage). Note that the percentages add to more than 100% as more than one reason could be given for each patient. These data are routinely collected on all patients seen by our PC team as part of our institution's participation in the Palliative Care Quality Network (www.pcqn.org).

need, recognizing that any such materials should be only a starting point and that provider judgment remains crucial.

Our team's ability to safely and responsibly provide consultation for patients with COVID-19 relied on our ability to rapidly implement inpatient telemedicine services.⁸ Our success was dependent on having access to technology (in-room computers and/or iPads) and software (videoconferencing with one's platform of choice), as well as personnel capable of rapidly adapting to new workflows and adjusting to a new model of care delivery. Significant time and attention were needed with bedside providers and family members to coach them through the use of technology and provide anticipatory guidance before video visits-especially when patients were unable to interact. Programs interested in providing telemedicine consultation should first build this technological and logistical foundation and recognize that standard communication techniques may need to be adapted when using technology to communicate with patients and families.1

Transdisciplinary care is always critical in PC, but perhaps even more so for this patient population for whom goals, support, and communication needs are particularly acute and complex. Although physicians screened patients for PC needs in our pilot, we quickly discovered that input from all team members was needed. Crucial emotional, spiritual, and existential supports provided by our social worker, chaplain, and clinical nurse specialist became the backbone of our intervention. These team members worked to mitigate trauma and complicated grief and formed trusting longitudinal relationships with patients and families during the course of prolonged hospitalizations. Teams should also recognize the emotional and existential strain felt by primary

team providers and build support for colleagues into routine care.

Given a lower surge in our region, our institution has so far been able to offer all patients with COVID-19 with identified PC need a full team consult. To meet a larger demand, programs may need to recruit team members not on service to conduct the screen and/or develop systems to categorize patients' needs and implement a set of tiered interventions matched to their intensity and scope. Given the predominance of support needs in this population, bandwidth could also be expanded by allowing nonphysician team members to follow patients independently.

Conclusions

The PC needs of patients with COVID-19 and their families are profound and may not be adequately identified or addressed by traditional consultant referral systems. Given the potentially prolonged duration of the pandemic and the possibility of future patient surges, PC teams should consider implementing a process of proactive screening and outreach to settings in their hospital with high need. If successful, such processes could extend beyond COVID-19, generating a new standard of practice and a small silver lining to the pandemic.

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References

- 1. Aldridge MD, Hasselaar J, Garralda E, et al. Education, implementation, and policy barriers to greater integration of palliative care: a literature review. Palliat Med 2016;30: 224–239.
- 2. Bush RA, Pérez A, Baum T, Etland C, Connelly CD. A systematic review of the use of the electronic health record for patient identification, communication, and clinical support in palliative care. JAMA Open 2018;1:294–303.
- 3. Hua MS, Li G, Blinderman CD, Wunsch H. Estimates of the need for palliative care consultation across United States intensive care units using a trigger-based model. Am J Respir Crit Care Med 2014;189:428–436.
- 4. Center to Advance Palliative Care. Specialty palliative care: COVID crisis service design. Available from https://www.capc.org/documents/download/766/. Accessed May 13, 2020.
- **5.** Fausto J, Hirano L, Lam D, et al. Creating a palliative care inpatient response plan for COVID19—the UW medicine experience. J Pain Symptom Manage 2020;60:E21—E26.
- 6. GeriPal Podcast. COVID in New York 2: Podcast with Craig Blinderman, Shunichi Nakagawa, and Ana Berlin. March 30, 2020. Available from https://www.geripal.org/

- 2020/03/covid-in-new-york-2-podcast-with-craig.html. Accessed May 13, 2020.
- 7. Ankuda CK, Woodrell CD, Meier DE, Morrison RS, Chai E. A beacon for dark times: palliative care support during the coronavirus pandemic. NEJM Catalyst 2020.
- 8. Humphreys J, Schoenherr L, Elia G, et al. Rapid implementation of inpatient telepalliative medicine consultations during COVID-19 pandemic. J Pain Symptom Manage 2020; 60:E54–E59.
- **9.** Bischoff KE, O'Riordan DL, Marks AK, Sudore RL, Pantilat SZ. Care planning for inpatients referred for palliative care consultation. JAMA Intern Med 2018;178:48–54. Erratum in: JAMA Intern Med 2018;178:157.
- 10. Center to Advance Palliative Care. Palliative care referral criteria: COVID-19 context. Available from https://www.capc.org/documents/download/762/. Accessed May 15, 2020.
- 11. Calton B, Abedini N, Fratkin M. Telemedicine in the time of coronavirus. J Pain Symptom Manage 2020;60: E12–E14.
- 12. Downar J, Goldman R, Pinto R, Englesakis M, Adhikari NJK. The "surprise question" for predicting death in seriously ill patients: a systematic review and meta-analysis. CMAJ 2017;189:E484—E493.