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Brief Quality Improvement Report

The Impact of Integrating Palliative Medicine Into COVID-19 Critical Care



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Abstract

Background. Ensuring high-quality patient-centered care for critically ill coronavirus disease 2019 (COVID-19) patients presents unprecedented challenges. Many patients become critically ill unexpectedly and have not previously discussed their health-care wishes. Clinicians lack experience with this illness and therefore struggle to predict patient outcomes.

Measures. Critical care medicine (CCM) providers were surveyed about the effectiveness and efficiency of a pilot intervention.

Intervention. Proactive palliative care rounding with CCM providers on COVID-19 intensive care units.

Outcomes. Fifty-four percent of CCM providers responded to the survey (21/39). CCM providers rated the intervention highly across all domains. CCM providers frequently identified that early palliative involvement was critical to providing families with information and support when separated from their loved ones.

Conclusions/Lessons Learned. This pilot study found that proactive rounding improves critical care provider assessments of quality of care for patients and families and allows CCM providers to focus their efforts on managing complex physiology and surges. *J Pain Symptom Manage* 2021;62:153–158. © 2020 American Academy of Hospice and Palliative Medicine. Published by Elsevier Inc. All rights reserved.

Key Words

COVID-19, Serious illness communication, Early palliative, Proactive rounding, Consult identification

Key Message

This article describes a palliative and critical care medicine collaborative rounding process to identify COVID-19 ICU patients in need of palliative consultation. The results indicate that adoption of a proactive palliative rounding process was perceived as beneficial to patients and critical care providers particularly in supporting high-quality serious illness communication.

Background

Since January 2020, coronavirus disease 2019 (COVID-19) has spread globally, affecting health on an unprecedented scale and challenging clinicians across all disciplines. COVID-19 patients who are admitted to the intensive care unit are currently estimated to have about a 30% mortality rate.¹ From a palliative care perspective, caring for a critically ill COVID-19 patient presents with a unique set of challenges. Many of these

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patients become critically ill unexpectedly and have not previously discussed or documented their health-care wishes. Families are physically separated from loved ones because of visitor restrictions and infection control measures. Clinicians lack experience with this illness and therefore struggle to predict and communicate patient outcomes. Time constraints and language barriers are additional obstacles to intensivists attempting to guide families and surrogates through complex medical decision-making, while family members themselves struggle with fear of loss and concern over their own health.

Palliative medicine specialists can support patients, families, and colleagues with serious illness communication and prognostication. Before the COVID-19 pandemic, it has been shown that early identification of critical illness is associated with timely communication, and patients who receive early palliative intervention are more likely to decline resuscitation, spend less time in the ICU, and report an improved quality of life.^{2,3} Prompt intervention for patients with COVID-19 facilitates timely discussions of prognosis and code status.⁴ It is a logical extension that early palliative involvement for patients with COVID-19 may also prevent unwanted life-sustaining treatment, decrease undue psychological stress for patients and families, and minimize low-quality care.⁵

As many hospital teams prepared to meet the needs of a growing COVID-19 patient population, the palliative medicine (PM) director of our institution approached the critical care medicine (CCM) service to devise an efficient approach to ensure timely and comprehensive PM consultation for patients in need and to help support the CCM service during this busy and intense time. The teams agreed to initiate immediately a daily system of proactive palliative care rounding to identify appropriate consults together. The objective of this study was to determine the effectiveness and efficiency of this intervention to improve quality of care from the perspective of critical care providers.

Intervention

The George Washington University Hospital (GWUH) is a 385-bed urban, tertiary care, academic medical center in Washington, D.C. The GWUH critical care unit is a 56-bed mixed medical-surgical intensive care unit staffed by intensivists from a variety of backgrounds (internal medicine, anesthesia, surgery, pulmonary medicine, and emergency medicine). PM and CCM maintain a close working relationship at our academic medical center. Despite there being no formal trigger system for palliative consultation on critical care patients, PM is frequently involved in

complex critical care cases to assist with goals of care communication, advanced symptom management, and transitions of care, including hospice discharge.

During the initial surge, our institution had two 16-bed dedicated COVID-19 units. Only patients requiring escalating respiratory support, mechanical ventilation, or vasopressors were admitted to the intensive care unit. Patients stable on high-flow nasal cannula or noninvasive positive pressure ventilation were not admitted to the intensive care unit. One hundred sixty-two COVID-19–positive patients received care in our intensive care unit from March 17th to June 7th. During this time period, Washington D.C. had 9386 COVID-19 cases and 491 deaths.⁶ The city's number of newly diagnosed COVID-19 infections peaked on April 24th. The racial distribution of the GWUH ICU COVID-19 patients during that time period was as follows: 65% of patients identified as non-Hispanic black, 15% patients identified as Hispanic, 8% white, 4% Asian, and 8% other.

From mid-March 2020 onward, an attending physician member of the hospital's PM consult team engaged in proactive rounding with CCM. A PM provider met with members of the critical care COVID ICU teams (attending physicians or advanced practice providers) each weekday at the conclusion of their respective team rounds for a focused review of each COVID-19 ICU patient. Common indications for formal consultation included but were not limited to unclear surrogacy, fractured decision-making among surrogates, imminent death syndrome without limits to resuscitation in place, or overall additional family support needs. PM providers did not initiate consultation or communication with patients or families without the agreement of CCM. PM providers did provide "curbside" recommendations and coach CCM colleagues at times to promote primary palliative skills, particularly those related to eliciting health-care values, breaking bad news, and providing recommendations to efficiently promote clinical decision-making.

When initiated, PM providers carried out consultation in the usual comprehensive format: assessing the entirety of a patient's medical condition, accurately identifying surrogates, engaging surrogates in discussions about the patient as a whole person including any known health-care values or previously stated or implied health-care wishes, and providing counseling around the illness course and expected outcomes. PM providers typically aim to provide recommendations for health-care decision-making, including limitations to care and transitions of care based on known patient values and realistic clinical options. Serving in this interpretive and guiding role for patients and surrogates was complicated by the rapidly changing treatment modalities and sometimes unpredictable clinical course of COVID-19. Given

visitor restrictions, most communication with surrogate decision-makers took place by phone or video conference. Certain consults resulted in a single episode of communication focused on decision-making during a crisis moment in care. Other consults called for frequent touches and communication to multiple family members over days or longer by the interdisciplinary palliative team.

Measures

During the week of July 27, 2020, we distributed an anonymous electronic survey using Google Forms to 39 attending physicians, advanced practitioners, and CCM fellows at our institution (See [Appendix Fig. 1](#)). The survey was conducted to evaluate the performance of the PM intervention, which was ongoing, and to identify opportunities for improvement in preparation for another potential surge. Survey questions were developed collaboratively by all members of the research team and tested with two clinicians uninvolved with the project. The survey was limited to one demographic question, four five-point Likert scale questions, and four free-text questions to maximize the response rate and quality of the responses. Secondary analysis of survey data was determined to be nonhuman subjects research by the George Washington University Institutional Review Board.

We used descriptive statistics to examine the results of the Likert-scale questions and summative content analysis to analyze the free-text questions.⁷ All members of the research team independently reviewed the survey results and agreed upon a coding scheme for free-text responses. Two independent reviewers coded the responses (A. C., T. W.). A third independent review was done in the event that the two reviewers had discordant codes (M. I.). Each code was only counted one time per survey, and the frequency of each code was calculated. Google sheets were used for coding and classification.

In addition, we used descriptive statistics to examine code status at the time of death using data from our hospital's internal COVID-19 registry. Registry data were manually abstracted from the electronic medical record by medical students into a REDCap electronic data capture tool hosted at the Clinical and Translational Science Institute at Children's National. One hundred eighteen patients, or 73% of patients, who received care in the ICU during the time of the intervention were entered into the registry. We compared the distribution of code status at the time of death for COVID-19 patients to that of all patients who died in our ICU in 2018 (data were previously collected for another project.) using Chi-squared analysis in Stata/IC-15.1. Both projects received

exemptions from the George Washington University Institutional Review Board.

Outcomes

Survey results were collected from 21 members of the critical care team: 9 attendings, 7 advanced practice providers, and 5 fellows (response rate of 54%). Assessments of clinician satisfaction, perceived efficiency of the intervention, allowance of more time for critical care, and communication with families received average scores of 4.81, 4.71, 4.52, and 4.71 out of 5, respectively.

Most free-text responses noted the dedicated time for patient and family support to be a key strength of the intervention ([Table 1](#)). Poor prognosis (10 providers), poor family understanding of disease severity (8 providers), and challenges in family dynamics (8 providers) were frequently noted to be triggers for PM consultation for COVID-19 patients.

The palliative intervention was well received. One clinician stated "it can feel like a conflict of interest (for lack of a better phrase) to have a goals-of-care discussion as our first discussion with the family, so it is very useful to have the palliative care team help initiate." Another shared that having daily check-ins was helpful stating that "it would lead me to consult earlier on patients I may not consider or think about until later."

Regarding potential improvements, 4 of 12 (9 responses were blank) requested increased PM staffing to improve efficiency and allow for ongoing patient-family support. One clinician proposed "prespecified criteria for triggering palliative intervention for any patient that arrives to the ICU." Another suggested intervening a step earlier, engaging high-risk patients before they reach the ICU. It was requested for PM to "meet with the medicine teams or rapid response nurses to find out who is on the brink of getting worse and [make] sure that real conversations happen."

For COVID-19 patients in the registry with in-hospital death ([Fig. 1](#)), 28.77% (21/73) had a code status of Comfort Measures Only (CMO) at the time of death compared with 70.14% (249/355) of the general patient ICU population who died at our institution in 2018 ($P < 0.001$).

Discussion

The proactive joint rounding model for the care of critically ill COVID-19 patients aimed to strengthen the clinical teams' capacity to best care for this unique and challenging population, improve patient- and family-centered care, and support families in a very isolating time. Families were not able to physically

Table 1
Survey Results for “Please Describe the Strengths of This Intervention”

Theme Identified	Number of Providers	Example Quotes
Allowed more dedicated time for patient/family support	12	“Palliative is wonderful at making sure the family knows that their loved one is seen as a human life who is a father/mother/partner/etc. to their families”
Improved communication with families	6	“They help facilitate conversations with families and help as an extra provider to provide information and care to the patient.”
Assisted ICU team with defining goals of care and setting expectations	4	“Helping to set expectations/ goals or care from the very start. Many of the families look for guidance with respect to these discussions. Establishing relationships and trust with family is more challenging over the phone than in person.”
Allowed ICU team to focus on clinical care	3	“Updates/conversations with COVID families are very time consuming and the palliative care team has helped to alleviate some of the burden from the ICU Team.”

see the patient or attend multidisciplinary rounds as is standard practice in our facility. This led to a breakdown in the usual communication practices, threatening the overall quality of care. PM helped fill this gap by providing clinical updates to families while

simultaneously discussing goals of care. As made evident through the postintervention survey, CCM providers rated the intervention highly across all domains. This illustrates the CCM team’s appreciation for the value that PM brought to COVID-19 care. Early PM involvement allowed the CCM team more time to care for patients, while the PM team could provide the family with “dedicated time to discuss the patient’s clinical course” and offer “additional support and explanation.” The PM team could provide an outside voice separate from the care team to update the families and provide a “second opinion” at times. While the PM providers could “focus entirely on the patient’s palliative goals, the ICU providers could separately discuss clinical status and treatment options,” thereby maximizing efficiency and division of labor. This multidisciplinary approach was an invaluable service for those families who “need(ed) help understanding the reality of the patient’s clinical picture” or for those who were adversely affected by fractured decision-making.

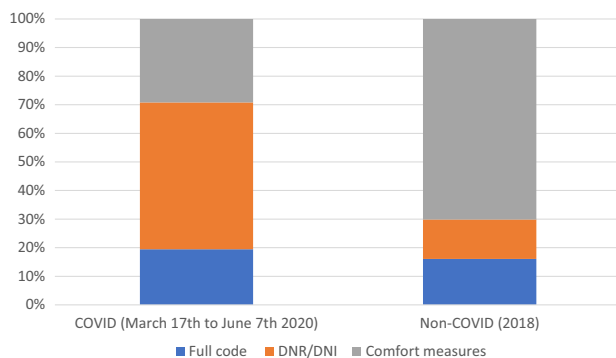


Fig. 1. DNR and comfort measure utilization in ICU mortalities, comparison between COVID and non-COVID mortalities.

At times, PM providers helped to ensure that patient's wishes were upheld, thereby avoiding certain aggressive measures such as intubation, even in the face of certain death. On other occasions, PM providers reinforced the CCM team's decision to provide aggressive interventions based on the patient's wishes. PM providers often played a role in informing surrogates of anticipated death, outlining the great extent of advanced artificial life support and novel therapies already being offered to a patient, and placing limits on resuscitation efforts that would not be expected to yield benefit. PM also coached CCM colleagues in primary palliative skills to better serve all patients in their care.

While code status of patients with COVID-19 in this study was less likely to be de-escalated to CMO than all comers with ICU care in our hospital in 2018, this is not necessarily a reflection of the impact of our quality-improvement intervention but perhaps proof of the importance of enhanced serious illness communication for this patient group. Given that 54% of patients with COVID-19 with ICU stay died in our hospital during this time period, the lower rate of CMO demonstrates that most patients who died were receiving ongoing aggressive care even at the time of death. The complex and ever-evolving nature of COVID-19 care with sometimes day-to-day changes in available experimental therapies posed challenges for prognostication and care planning for even the sickest patients. The desire to preserve life during a tragic time, especially with the hope of better therapies around the corner, made the recommendation for a transition to CMO less likely.

Limitations

This quality-improvement study is not without limitations. Our setting is unique in that the ICU did not exceed intended capacity during the COVID-19 pandemic. Critically ill patients were cared for by a relatively small number of intensivists who quickly became accustomed to the new process. There may have been different outcomes if a hospital surge had brought new providers into this setting or overwhelmed our health-care team. The PM team had appropriate staffing for early intervention which is not found in all settings. About 54% of the CCM team responded to the survey. Most unrepresented clinicians were advanced practice care providers. A larger percentage of responses may have reduced the potential for bias. There was a large amount of variation in the nonrequired free-text questions, both in the presence and length of responses. In addition, while we were able to capture code status at the time of discharge for the majority of our COVID-19

patients, these results fail to capture the patients that were not entered into the registry.

Conclusions/Lessons Learned

The purpose of this proactive palliative care rounding model was to help CCM provide the best care possible to COVID-19 patients, with a focus on supporting serious illness communication and decision-making. Through fruitful daily interactions with CCM colleagues, PM providers grew in their own abilities to prognosticate and counsel patients and surrogates. As made evident by the survey results, this PM and CCM collaboration was perceived as highly effective by CCM. With several months' experience with the care of critically ill COVID-19 patients, PM and CCM colleagues can now work to formulate specific triggers for PM consultation in COVID-19 ICU care. Furthermore, this PM-CCM collaborative has highlighted the need for even earlier identification of palliative care needs, specifically on the hospital wards before ICU transfers are warranted. During the next surge, we are planning to add to our intervention by enhancing the collaboration between PM providers and hospital medicine and the rapid response team to assess patients at high risk for decompensation, optimize symptom management, identify areas of knowledge gaps with patients and surrogates, and help guide patients and surrogates through complex medical decision-making to include setting desired limits to care.

Disclosures and Acknowledgments

The authors declare no conflicts of interest.

Supplementary Data

Supplementary data related to this article can be found at <https://doi.org/10.1016/j.jpainsymman.2020.12.014>.

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Integrated Palliative Care In COVID-19

Please evaluate our initiative for integrated palliative care in the ICU.

What is your role in the ICU? *

Multiple Choice: Attending, Advanced practice Provider, Fellow, Other

Rate your satisfaction with palliative involvement in your care of COVID-19 patients. *

Likert Scale: 1- Very Dissatisfied, 5- Very Satisfied

Rate the efficiency of the palliative care intervention. *

Likert Scale: 1- Very Inefficient, 5- Very Efficient

Rate the following: Early palliative involvement allowed for more time to provide critical care. *

Likert Scale: 1- Strongly Disagree, 5- Strongly Agree

Rate the following: Early palliative involvement facilitated communication with family. *

Likert Scale: 1- Strongly Disagree, 5- Strongly Agree

In what situations do you consider a formal palliative consult? Can you describe an example of a patient's clinical status or family situation?

Free Text Answer

Please describe the strengths of this intervention.

Free Text Answer

Could this model be useful outside of COVID-19? If so, in what clinical cases?

Free Text Answer

Please describe any suggestions for improvement.

Free Text Answer

*: Denotes required questions

Appendix Fig. 1. Survey distributed to critical care medicine team.