RESEARCH LETTER

## Early Intervention of Palliative Care in the Emergency Department During the COVID-19 Pandemic

During the novel coronavirus disease 2019 (COVID-19) pandemic, it is particularly critical to ensure that life-sustaining treatment (LST) such as intubation and resource-intensive cardiopulmonary resuscitation (CPR) are aligned with a patient's goals and values, and to avoid LSTs in patients with a poor prognosis that are unlikely to be beneficial, but have a high risk of causing additional suffering.[1] The high volume and acuity of COVID-19 patients makes it extremely challenging for emergency department (ED) clinicians to take adequate time to clarify goals of care (GOC). We implemented an ED-based COVID-19 palliative care response team focused on providing high-quality GOC conversations in time-critical situations. We examined the clinical characteristics and outcomes of patients who received this intervention.

**Methods** | This retrospective observational study was conducted in the ED of an urban, quaternary care academic medical center in New York, New York. We included 110 patients for whom the palliative care team was consulted between March 27, 2020, and April 10, 2020, with follow-up through May 9, 2020. Columbia University institutional review board approved this study and waived the need for informed consent.

Emergency department clinicians consulted the palliative care team for assistance with any palliative care-related needs, including GOC clarification and cases where stated GOC did not align with expected prognosis. The palliative care team (1 attending physician who was board-certified in hospice and palliative medicine, 1 hospice/palliative medicine fellow clinician, and 4 psychiatry resident physicians and fellow clinicians, all trained in GOC conversations and supervised by the palliative care attending physician) was available in person 12 hours per day, and for phone consultation overnight and on weekends. The palliative care intervention focused on GOC conversations: conveying the prognosis in a clear and simple way, exploring patients' goals and values, and making care recommendations based on elicited goals.[1,2]

Deidentified demographic data were collected from the medical record. Primary outcomes included GOC before and after palliative care intervention, as well as GOC on death or discharge. Secondary outcomes included clinical course and length of stay in the hospital

Goals of care were defined as "full code" (pursue all LSTs including intubation and CPR); "do-not-resuscitate (DNR) only" (pursue all LSTs excluding CPR); "DNR/do-not-intubate (DNI), continue medical treatment" (pursue all LSTs excluding intubation and CPR); and "comfort-directed care" (forgo LSTs, deliver symptom-focused treatment only). The GOC were presumed to be full code if no advance directives or medical orders for life-sustaining treatment (MOLST) were found on presentation to the ED.

Six patients were still hospitalized at the time of data review; they were excluded from the analysis for clinical course.

**Results** | The 110 patients were aged a median (range) of 81.5 (46-101) years and 61 (55.4%) were women. Patient demographic and clinical characteristics are reported in **Table 1**. Most patients were community-dwelling elderly persons (aged >75

Table 1. Demographic and Clinical Characteristics in 110 Patients

| Characteristic | No. (%) |
|---|---|
| Age, median (range), y | 81.5 (46-101) |
| <65 | 9 (8.2) |
| 65-74 | 15 (13.6) |
| 75-84 | 46 (41.8) |
| 85-94 | 32 (29.0) |
| 95-104 | 8 (7.3) |
| Sex | |
| Female | 61 (55.4) |
| Male | 49 (44.5) |
| Ethnicity/race | |
| White | 13 (11.8) |
| African American | 25 (22.7) |
| Hispanic/Latino | 57 (51.8) |
| Asian | 2 (1.8) |
| Other | 1 (0.1) |
| Unknown or declined to answer | 12 (10.9) |
| SARS-CoV-2 PCR result | |
| Positive | 89 (79.1) |
| Negative, but high clinical suspicion for COVID-19 | 7 (6.4) |
| Unknown, not tested but presumed/suspected COVID-19 | 6 (5.5) |
| Negative, treated for a medical condition other than COVID-19 | 8 (7.3) |
| Comorbidities | |
| Hypertension | 84 (76.4) |
| Cardiovascular disease | 72 (65.5) |
| Diabetes mellitus | 56 (50.9) |
| Chronic kidney disease | 36 (32.7) |
| Documented history of dementia | 36 (32.7) |
| Obesity (BMI ≥30)[a] | 24 (21.8) |
| Chronic lung condition | 20 (18.2) |
| Neurologic disease and/or history of neurosurgery | 14 (12.7) |
| End-stage renal failure on hemodialysis | 8 (7.3) |
| Immunosuppression | 4 (3.6) |
| Active cancer | 3 (2.7) |
| Liver disease | 2 (1.8) |

(continued)

Table 1. Demographic and Clinical Characteristics in 110 Patients (continued)

| Characteristic | No. (%) |
|---|---|
| No. of comorbidities | |
| ≥2 | 106 (96.4) |
| <2 | 4 (3.6) |
| Living situation prior to admission | |
| Home | 73 (66.4) |
| Long-term care facility | 36 (32.7) |
| Hospice | 1 (0.9) |
| Review of advance directive or MOLST | |
| No documentation of AD or MOLST | 97 (88.2) |
| Full code on AD or MOLST | 7 (6.4) |
| DNR/DNI on AD or MOLST | 6 (5.5) |
| Decision making capacity on presentation to the ED | |
| With decision-making capacity | 15 (16.3) |
| Without decision-making capacity | 95 (83.6) |
| If no decision-making capacity, relationship of health care proxy/surrogate | |
| Total No. | 95 |
| Spouse/domestic partner | 13 (14.1) |
| Adult child ≥18 y | 59 (64.1) |
| Parent | 1 (1.0) |
| Adult sibling ≥18 y | 7 (7.6) |
| Extended relative[b] | 10 (9.1) |
| Close friend | 1 (1.0) |
| Unknown/unavailable | 4 (3.6) |

Abbreviations: AD, advance directive; COVID-19, coronavirus disease 2019; BMI, body mass index; DNR/DNI, Do-not-resuscitate/Do-not-intubate; ED, emergency department; MOLST, medical orders for life sustaining treatment; PCR, polymerase chain reaction; SARS-CoV-2, severe acute respiratory syndrome coronavirus 2.

[a] Body mass index calculated as weight in kilograms divided by height in meters squared.

[b] Extended relative (grandchild, niece, nephew, cousin, uncle, aunt).

Table 2. Outcomes

| Outcome of GOC discussion | Patients, No. (%) | | |
|---|---|---|---|
| | GOC prior to palliative care intervention in ED (n = 110) | GOC after first palliative care encounter (n = 110) | GOC on death or discharge (n = 104)[a] |
| Full code | 91 (82.7) | 20 (18.2) | 9 (8.7) |
| DNR only | 1 (0.9) | 11 (10.0) | 14 (13.5) |
| DNR/DNI, continue medical treatment | 15 (13.6) | 47 (42.7) | 27 (26.0) |
| Comfort-directed care | 3 (2.7) | 32 (29.0) | 54 (51.9) |

Abbreviations: DNR/DNI, do-not-resuscitate/do-not-intubate; GOC, goals of care.

[a] Incomplete outcome data for 6 patients because they were still hospitalized during time of data review on May 5, 2020.

years) with at least 2 comorbidities and lacked decision-making capacity at the time of presentation. Very few patients presented with documented advance directives or MOLST and therefore were presumed to be full code.

The primary outcomes are summarized in **Table 2**. After initial palliative care intervention, the number of full code decreased from 91 patients (82.7%) to 20 patients (18.2%). Among these 71 patients (64.5%) in whom CPR was declined, mechanical ventilation was also declined in 61 patients (55.5%) (ie, 32 patients in DNR/DNI, continue medical treatment, 29 patients in comfort-directed care). On discharge, the number of full code further decreased to 9 patients (8.6%), whereas comfort-directed care increased to 54 patients (51.9%). The median (range) length of stay was 4 (0-28) days and 71 patients (68.2%) died in the hospital. Among 33 patients (31.7%) who were discharged alive, 6 patients (5.8%) were discharged with hospice care.

**Discussion** | The included patients' demographic characteristics were consistent with those of critically ill patients with COVID-19 previously reported[3] and with those of patients reported to be at highest risk of death from COVID-19.[4] Patients without advance care planning conversations are known to be at risk of receiving unwanted, high-intensity, lower-quality care,[5] even though many seriously ill patients do not prefer LSTs at the end of life.[6]

The most important finding in this study was, after palliative care intervention in the ED, most patients and their surrogates opted to forgo mechanical ventilation and/or CPR, and that tendency further increased on discharge. We believe timely GOC conversations by the palliative care team helped avoid unwanted LSTs for patients with a poor prognosis. Study limitations include potentially limited generalizability given the retrospective design at a single institution. Also, palliative care consultation was initiated by ED clinicians, which may have led to selection bias, though a high rate of altered GOC after intervention suggests significant, unaddressed need in the outlying population.

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