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Performance of consultative palliative care model in achieving quality metrics in the ICU

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Abstract

Context—Quality metrics for intensive care unit (ICU)-based palliative care have been proposed but it is unknown how consultative palliative care can contribute to performance on these measures.

Objectives—Assess adherence to proposed quality metrics of intensive care unit (ICU)-based palliative care by palliative care specialists.

Methods—Surrogates for 9/14 patient-level quality metrics were assessed in all patients who received an initial palliative care specialist consult while in an ICU from 10/26/2012 to 1/16/2015 in the Global Palliative Care Quality Alliance, a nationwide palliative care quality registry.

Results—254 patients received an initial palliative care consultation in an ICU setting. Mean (SD) age was 67.5 (17.3) years, 52% were female. The most common reasons for consultation were symptom management (33%) and end-of-life transition (24%). Adherence to ICU quality metrics for palliative care was variable: clinicians documented presence or absence of advance directives in 36% of encounters, assessed pain in 52.0%, dyspnea in 50.8%, spiritual support in 62%, and reported an intervention for pain in 100% of patients with documented moderate to severe intensity pain.

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Conclusion—Palliative care consultations in an ICU setting are characterized by variable adherence to candidate ICU palliative care quality metrics. While symptom management was the most common reason for PC consultation, consultants infrequently documented symptom assessments. Palliative care consultants performed better in offering spiritual support and managing documented symptoms. These results highlight specific competencies of consultative palliative care that should be complimented by ICU teams to ensure high quality comprehensive care for the critically ill.

5 MeSH terms, Index Medicus

Palliative Care; Quality; Critical Care; End of Life Care; Health Services Research

Introduction

Palliative care is well recognized as an integral component to comprehensive critical care delivery.¹ In other areas, evidence-based quality-measurement and reporting has been associated with improved adherence and outcomes,^{2,3} so similar measures may improve palliative care. In 2006, a joint Robert Wood Johnson Foundation - Society for Critical Care Medicine (RWJF-SCCM) consensus group proposed 18 candidate metrics for assessing the quality of palliative care in the ICU.⁴ These metrics have recently been validated and operationalized.⁵ This study found performance on palliative care process measures in the intensive care unit (ICU) is highly variable, ranging from 3–98% adherence, but generally remains poor at about 50% performance overall. Work to define the structures and process that enhance quality of ICU-based palliative care is necessary.

Models of palliative care delivery can be generally thought of as consultative or integrative.⁶ The 2006 palliative care metrics espouse a model of integrative palliative care practice; they apply to all ICU patients, regardless of illness severity or expected outcome, and rely on the multidisciplinary critical care team to achieve them, reserving consultative palliative care services for a certain subset of patients with complex need. In contrast, there is a growing demand for consultative palliative care in the ICU and a drive towards involving palliative care specialists more often and earlier in the course of critical illness. Proactive palliative care consults have some proven benefits,⁷ and they could possibly enhance adherence to ICU-specific palliative care quality metrics.

The aim of this study was to examine the rate of satisfactory adherence to RWJF-SCCM quality metrics of ICU-based palliative care achieved by palliative care consultants.

Methods

Data

Study data were abstracted from the Quality Data Collection Tool (QDACT) data system shared by 6 community and academic palliative care organizations in the Global Palliative Care Quality Alliance (GPCQA) from 10/26/2012–1/16/2015. Briefly, the GPCQA is a nationwide learning health system in palliative care including community and academic partners predominantly in the southeastern United States.⁸ At each encounter entered into

the GPCQA data system, palliative care providers document patient- or proxy-reported data on a multi-domain comprehensive palliative care assessment, including symptom severity on the Edmonton Symptom Assessment Scale⁹, tolerability of symptoms, psychosocial and spiritual distress, quality of life, performance status, and prognosis for survival as estimated by the palliative care clinician. The QDACT database, also includes baseline demographics, primary diagnosis as assessed by the palliative care consultant, reason for palliative care consultation, and location of consultation.¹⁰

Measures

We first matched QDACT data elements to corresponding RWJF-SCCM quality measures. Acceptable surrogates existed for 9 of the 14 patient-level quality metrics (table 2). Patient-level metrics for which we were unable to find surrogates were items 4) Document goals of care (beyond advance directives, code status, etc), 5) Document physician communication with the family, 6) Documentation of interdisciplinary clinician-family conference, 7) transfer of key information with transfer out of the ICU, and 16) appropriate medications available during withdrawal of mechanical ventilation. These measures may have been available in the local medical records, but we do not have access to the full medical records of subjects entered into the QDACT database. The RWJF-SCCM also includes 4 structure-level quality metrics but are not included in QDACT such as: 8) policy for continuity of nursing services 9) open visitation policy for family members, 15) protocol for analgesia/sedation in terminal withdrawal, 18) opportunity to review experience of caring for dying patients by ICU clinicians.

Statistical analysis

Our analytic strategy was descriptive, reporting means and standard deviations (SD) of continuous measures, counts and percentages of categorical measures. If a quality metric was missing it was counted as absent consistent with the methods of quality assessment and reporting. All analysis was performed using SAS (version 9.4).

Results

We identified 254 documented patient encounters over the 27-month study period. Characteristics of the sample are displayed in Table 1. Mean (SD) age was 67.5 (17.3) years, 52% were female. The most common primary diagnoses were neurologic disease (28%), cardiovascular disease (18%), and cancer (17%). Ninety-five percent of patients had a life expectancy of <6 months as estimated by the palliative care consultant. The most common reasons for consultation were for assistance with symptom management (33%) and end-of-life transitions (24%).

Adherence to ICU quality metrics for palliative care by palliative care consultants was variable as shown in Table 2. Clinicians documented presence of decisional capacity in 8.7%, presence or absence of advance directives in 36% of encounters, assessed pain in 52.0%, dyspnea in 50.8%, spiritual support in 62%. In contrast, clinicians reported an intervention for dyspnea in 97.9% and for pain in 100% of patients with documented moderate to severe dyspnea or pain.

Discussion

Our aim was to describe the adherence to ICU-based palliative care quality metrics achieved by consultative palliative care teams. Quality measurement and reporting is useful to improve the reliability and quality of medical care, which is now being applied to ICU-based palliative care. We found highly variable performance on 9 patient-level quality metrics in a diverse and generalizable sample of ICU-based palliative care consultations. Palliative care consultants excelled in documenting the management of pain and dyspnea, as well as in the documentation of surrogate decision makers. In contrast, documentation of other metrics such as determining decisional capacity was poor.

This is one of the first studies to assess the quality of ICU-based palliative care consultations using the RWJF-SCCM metrics. Two prior studies have examined similar metrics, though from the perspective of the interdisciplinary critical care team. Penrod et al found poor performance on a similar set of process measures except in assessment and management of pain.¹¹ Similarly, Mularski and colleagues reported excellent documentation of pain, dyspnea, and goals of care, but suboptimal performance documenting the presence and contents of advance directives, identification of surrogate decision-makers, and medications ordered for palliative use during withdrawal of mechanical ventilation.⁵

Our data complement prior work by illustrating ways in which consultative palliative care may be helpful to the interdisciplinary critical care team—and also highlighting where palliative care needs might remain unfulfilled by current care delivery models. For example, palliative care consultants documented symptom assessments in only about half of cases overall. However, when significant symptoms were noted, they routinely documented an intervention. The critical care team, by contrast, documents symptoms at a high rate,⁸ likely due to a cultural expectation reinforced by documentation prompts. Perhaps palliative care clinicians focus their role in the ICU on recommendations for symptom management over routinely documenting symptom assessment, which may be seen as redundant.

Similarly, the palliative care consultants performed somewhat better than the critical care team in documenting psychosocial and spiritual support, likely reflecting their advanced training in these domains of palliative care. Importantly, though, critical domains of care such as communication and understanding end of life wishes appear to be poorly documented by both palliative care clinicians and the critical care team.

These findings may also be helpful as benchmarks or targets for initial implementation of the RWJF-SCCM quality metrics, setting reasonable and obtainable initial targets. Simply adopting these measures will result in higher rates of adherence. Performance will likely improve further through integration of new structures and processes such as checklists, streamlined documentation, and automated reporting. Electronic health record tools could serve as reminders, easing the documentation burden around capturing these data and better defining the ideal interface between the critical care team and consultative palliative care.¹² For example, these measures may be useful for identifying patients whose palliative care needs remain unmet, directing consultative palliative care towards those most likely to benefit from their efforts.

Limitations of this report are some missing data and the imperfect mapping of QDACT database elements to the RWJF-SCCM quality metrics. Furthermore, while these metrics have been proposed, validated, and implemented, they have been formally endorsed by only one professional society.⁴⁵ Low adherence by consultative palliative care cannot be interpreted to mean palliative care is not beneficial to these patients or that the services weren't provided. Consultants may have documented relevant data in site-specific health records outside of QDACT for which we cannot account. Furthermore, there may be a gap between what services are performed and those that are documented. While this is a limitation when assessing the activities of palliative care, it may remain informative about palliative care consultants' role in achieving documentation of quality metrics.

It is also important to acknowledge that these metrics were designed for the critical care team in an integrative model of palliative care. We have made reference to other studies of these metrics that assessed adherence by the critical care team, which might not directly compare to our data. To better understand the role of consultative palliative care in achieving these quality metrics, future research should compare the impact of palliative care consultation on these measures directly to patients without palliative care consultation using the same methods of assessment.

Conclusion

We found that palliative care consultants achieve variable adherence to quality measures of ICU-based palliative care. Our report contributes to a discussion about models of care that best achieve core palliative care processes for critically ill patients. Most importantly, we need to better understand the tools to measure and improve palliative care. This will accelerate the development of care-processes that best match patients' needs to clinicians' competencies to best meet the palliative care needs of all our critically ill patients.

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Table 1

Characteristics of patients receiving ICU-based palliative care consults

Characteristic	ICU Patients (n=254)
Age	
Mean (SD), years	67.5 (17.3)
Missing	27
Gender	
Female	124 (51.5%)
Missing	13
Race	
African American	55 (21.7%)
White	180 (70.9%)
Other	10 (3.9%)
Unknown	9
Primary Diagnosis[^]	
Neurologic Disease	72 (28.3%)
Cardiovascular Disease	46 (18.1%)
Cancer	44 (17.3%)
Pulmonary Disease	38 (15.0%)
Infectious Disease	12 (4.7%)
Gastrointestinal Disease	8 (3.1%)
Other Diagnosis	28 (11.0%)
Reason for Consultation	
Setting Palliative Goals of Care	89 (38.5%)
Symptom Management	75 (32.5%)
End-of-Life Transition	56 (24.2%)
Withdrawal of life-prolonging therapies	9 (3.9%)
Advance Directives/Code Discussion	1 (0.4%)
Discuss interventions (e.g. artificial nutrition, PEG, tracheostomy)	1 (0.4%)
Missing	23
Palliative Performance Scale[*]	
Poor (0–30%)	93 (74.4%)
Moderate (40–60%)	28 (22.4%)
Good (70–100%)	4 (3.2%)
Missing	129
Patient- or Proxy Reported Quality of Life	
Poor	19 (39.6%)
Good/Fair	29 (60.4%)
Missing	132

Characteristic	ICU Patients (n=254)
Clinician-Estimated Prognosis	
<6 months	106 (95.5%)
>6 months	5 (4.5%)
Unknown	20
Missing	123
CPR Preferences	
DNR/DNI	91 (64.5%)
Full Code	50 (35.5%)
Missing	113

* Palliative performance scale is a single-item 11-point measure⁹

^ Primary diagnosis is determined by the palliative care consultant

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Table 2

Performance of Consultative Palliative Care on Patient-Level Measures of Quality of ICU-Based Palliative Care

RWJF/SCCM* Quality Measure	Description of Measure in QDACT	Metric adherence / eligible (%) (N=254)	Responses	
1. Assessment of patient decisional capacity	Asked to choose whether patient has capacity: yes/no	22/254 (8.7%)	Patient has Capacity	8/22 (36.3%)
			Patient Lacks Capacity	14/22 (63.6%)
2. Identification of surrogate decision-maker	If lack of capacity documented, clinician is asked to indicate if a proxy is documented	14 /14 [^] (100%)		
3. Presence and contents of advanced directive	Clinician is asked to document the presence of an advanced directive	91/254 (35.8%)	Advanced directives present	54/91 (59.3%)
			Advanced directives absent	37/91 (40.7%)
10. Offer of psychosocial or emotional support	Clinician is asked to document a patient's emotional wellbeing	115/254 (45.3%)	Adequate emotional wellbeing	41/115 (35.7%)
			Poor emotional wellbeing	74/115 (64.3%)
11. Pain assessment	Number of patients with documentation of pain assessment	132/254 (52.0%)	Pain present (any severity)	94/132 (71%)
			Pain <u>not</u> present	38/132 (28.8%)
12. Pain management	Number of patients with moderate/severe pain who had an intervention recorded for pain management	37/37 [^] (100%)		
13. Respiratory distress assessment	Number of patients with documentation of respiratory distress assessment	129/254 (50.8%)	Respiratory distress present	96/129 (74.4%)
			Respiratory distress <u>not</u> present	33/129 (25.6%)
14. Respiratory distress management	Number of patients with moderate/severe respiratory distress who had an intervention recorded for respiratory distress management	46/47 [^] (97.9%)		
17. Offer of spiritual support	Clinicians are asked to assess 2 items: spiritual well being and "are you at peace?" This is measured if either is answered	158/254 (62.2%)	Spiritual well-being present	65/158 (41.1%)
			Poor spiritual well-being	93/158 (58.8%)

The proposed measure is paired with the description of the surrogate measure from QDACT and the performance on that measure. The right hand column presents patients' outcomes on these items.

[^] The measures apply to all patients except items 2, 12, and 14. In these, the denominators reflect the numbers eligible. For item 2, only patients who have lack of capacity documented require identification of surrogates. For items 12 and 14, only patients with moderate or greater symptoms require intervention.

* RWJF-SCCM: Robert Wood Johnson Foundation and Society for Critical Care Medicine End of Life Peer Workgroup's proposed measures of quality palliative care in the ICU. The numbers correspond to the initial numbers in that document.⁴