

Characteristics of Emergency Department Patients Who Receive a Palliative Care Consultation

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Abstract

Background: A large gap exists between the practice of emergency medicine and palliative care. Although hospice and palliative medicine has recently been recognized as a subspecialty of emergency medicine, few palliative care teams routinely interact with emergency providers, and primary palliative care skills among emergency providers are lacking.

Objective: To identify the proportion and characteristics of patients who receive a palliative care consultation and arrive via the emergency department (ED).

Methods: A descriptive study of adult ED patients from an urban, academic tertiary care hospital who received a palliative care consultation in January 2005 or January 2009.

Results: In January 2005, 100 of the 161 consults (62%) arrived via the ED versus 63 of 124 consults (51%) in January 2009 ($p=0.06$). Mean days from admission to consultation in January 2005 were six days (standard deviation 11), versus nine days (SD 26) in January 2009 ($p=0.35$). Three of the 100 consultations (3%) in January 2005 were initiated in the ED, versus 4 of the 64 (6%) in January 2009.

Conclusions: At an urban academic medical center with a well-developed palliative care service, the majority of palliative care consultations were for patients who arrive via the ED. Despite this, only a small minority of consultations originated from emergency providers and consultation was on average initiated days into a patient's hospital stay.

Introduction

A LARGE GAP EXISTS between the practice of emergency medicine and palliative care. Although hospice and palliative medicine has recently been recognized as a subspecialty of emergency medicine, few palliative care teams routinely interact with emergency providers and primary palliative care skills among emergency providers are lacking.¹⁻³ While interest is growing, the number of hospitals with palliative care / emergency medicine partnerships remains limited.⁴⁻⁷

Palliative care consultation has been shown to improve patient and caregiver satisfaction,⁸⁻¹¹ decrease pain and other burdensome symptoms,¹²⁻¹⁴ decrease costs and length of stay,^{8,15-17} and improve quality of life^{8-10,18-20} for seriously ill patients with life-limiting disease. While this is well recog-

nized, there are long delays between admission and palliative care consultation for such patients.^{21,22} Palliative care/emergency medicine partnerships are thought to be one way to move consultation upstream for appropriate patients who arrive via the emergency department (ED).^{23,24} This could provide earlier benefits to patients, families, and payers, or possibly even avoid an ED visit or admission altogether.²⁵

To forge partnerships between palliative care and emergency medicine, it is necessary to understand which patients who receive a palliative care consultation arrive via the ED, as well as any personal characteristics that may identify them in advance. This might uncover patterns that would help determine a profile of such patients as well as identify common characteristics that can be grounds for further research. For this study, our objectives were to describe the proportion and characteristics of ED patients who receive a palliative care

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consultation. As the field is changing rapidly, we chose to evaluate and compare two points in time, 2005 and 2009.

Methods

Design and setting

This was a descriptive study of adult ED patients who received a palliative care consultation. All medical records for adults 18 years or older who arrived via the ED and received a palliative care consultation in January 2005 or January 2009 were reviewed. The ED is part of an urban, academic, tertiary care center with over 100,000 annual visits. The palliative care team sees over 1,000 consults per year. The Mount Sinai School of Medicine Institutional Review Board approved the study.

Subjects

The names and medical record numbers of all patients who received an inpatient palliative care consult during the months of January 2005 and 2009 were provided to study investigators by the palliative care service administrator. All patients who arrived via the ED were included.

Data collection

At the time of the study, the ED used a comprehensive electronic medical record system (ED Pulsecheck, PICIS, Inc., Wakefield, MA) for patient tracking, physician and nursing documentation, and order entry. All data entered into the system are time stamped, and patient charting is organized according to presenting condition. Patient-related and pain care data were collected using medical record review.

An investigator or trained research assistants (RAs) extracted all data following 12 recommended criteria for medical record review studies.²⁶ All RAs had at least a four-hour training session on the ED medical record abstraction process, with shadowing of at least 10 record reviews by an investigator. Each RA independently completed at least 20 test abstractions that were each compared with that of an investigator (Ula Hwang). The RA was qualified to abstract independently when test abstractions were completed with 95% agreement. Performance on abstractions was monitored, with 10% of the charts randomly reviewed. There was 100% inter-observer reliability of the variables of interest for this cohort.

Variables studied

Factors evaluated included patient-related, clinical, and ED care related characteristics of those consults that arrived via the ED. A coding scheme was developed to guide the collection of the following variables: age, gender, race/ethnicity, date and mode of arrival, Emergency Severity Index (ESI),²⁷ chief presenting complaint, final ED diagnosis, pain score, analgesia administration, procedures done in the ED, and documentation of advance directives in the ED. Chief presenting complaints was categorized as cancer-related, neurological, pain, respiratory, or other. Final ED diagnosis was categorized as cancer, HIV, neurological, pain-related, respiratory, or other. For example, neurological chief complaints include "weakness" and "dizziness," and final ED diagnoses include "stroke." Chief complaints or final diagnoses that did not fall into one of these categories were classified as "other."

Some patients had more than one chief complaint or final diagnosis, and the categorization was not mutually exclusive. Pain score was measured on the 11-point numeric rating scale (NRS-11).²⁸ With regard to pain care outcomes, any documentation of a numeric pain score 11-point numeric scale (0-10, 0 = none, 10 = severe) or attempt to ascertain pain level was considered a documented pain assessment. Moderate to severe pain was any pain score >6. Analgesics were classified as any opioid, nonsteroidal anti-inflammatory drugs and acetaminophen drugs administered during the ED visit. Other ED care related factors studied included whether or not the patient was intubated while in the ED and whether or not the ED EMR had any documentation of known advanced directives. Missing data were excluded from the analysis.

Statistical analyses

Descriptive statistics were performed on all patient characteristics (demographic and clinical). Bivariate analyses using chi-square tests were used to evaluate whether patient characteristics changed significantly between January 2005 and January 2009.

Results

During the two study months, there were a total of 285 palliative care consultations. In January 2005, 100 of the 161 consults (62%) arrived via the ED versus 63 of 124 consults (51%) in January 2009 ($p=0.06$). Mean number of days from admission to consultation in January 2005 was six days (SD 11), versus nine days (SD 26) in January 2009 ($p=0.35$). Three of the 100 consultations (3%) in January 2005 were initiated in the ED, versus 4 of the 64 (6%) in January 2009, and all seven patients were admitted to the hospital. Other demographic and clinical patient characteristics are listed in Table 1.

In 2005, the most common chief complaint for ED patients who received a palliative care consultation was respiratory (e.g., "shortness of breath") while in 2009 it was neurological (e.g., "weakness"). The "other" category included such complaints as "diarrhea," "jaundice," and "fall." The most common final ED diagnosis by category in both years was respiratory (e.g., "pneumonia"). "Other" included final diagnoses such as "cellulitis," "cirrhosis," and "renal failure."

There was pain score documentation for 93 patients (93%) in 2005 and 61 patients (97%) in 2009. Forty-four percent of patients were in moderate to severe pain on ED arrival in 2009, as opposed to 15% in 2005. Of those in moderate to severe pain, over half in both groups received analgesia (53% in 2005 versus 61% in 2009). Intubation was rare, with only 11 patients in 2005 and one in 2009 being intubated by the ED.

Information regarding advance care planning was documented by the emergency provider in a minority of cases. Fourteen percent of patients in 2005 had a documented DNR and 9% had a health care proxy, versus 17% and 6% in 2009, respectively.

Discussion

At an urban academic medical center with a well-developed palliative care service, the majority of palliative care consultations were for patients who arrived via the ED. Despite this, only a small minority (5%) of consultations originated from emergency providers and consultation was

TABLE 1. ED PATIENT CHARACTERISTICS WHO RECEIVED SUBSEQUENT PALLIATIVE CARE CONSULTATION

	2005 (N = 100)	2009 (N = 63)
Female, N (%)	59 (59)	35 (56)
Age, mean (SD)	72 (18)	66 (18)
Race/ethnicity, N (%)		
White	12 (31)	21 (35)
Black	11 (28)	18 (30)
Hispanic	13 (33)	16 (27)
Asian	1 (3)	3 (5)
Other	2 (5)	2 (3)
Arrived by ambulance, %	64 (64)	78 (49)
ESI, N (%)		
Level 1	4 (4)	1 (2)
Level 2	57 (57)	37 (59)
Level 3	37 (37)	25 (39)
Level 4	2 (2)	0 (0)
Level 5	0 (0)	0 (0)
Chief complaint,^a N		
Cancer	1	1
Neurological	23	22
Altered mental status	(16/23)	(5/22)
Weakness	(7/23)	(13/22)
Pain	14	18
Abdominal pain	(3/14)	(6/18)
Back pain	(3/14)	(1/18)
Chest pain	(2/14)	(4/18)
Respiratory	36	14
Shortness of breath	(29/36)	(13/14)
Cough	(4/36)	(1/14)
Other	33	11
ED diagnoses,^a N		
Cancer	22	15
HIV	4	3
Neurological	23	13
Stroke	(9/23)	(6/13)
Pain	9	13
Respiratory	29	16
COPD	(0/29)	(2/16)
CHF	(1/29)	(2/16)
Pleural effusion	(3/29)	(2/16)
Pneumonia	(9/29)	(2/16)
Other	30	19
Pain outcomes, N (%)		
Pain score documentation	93 (93)	61 (97)
Moderate to severe pain ^b	15 (15)	28 (44)
Moderate to severe pain & received analgesia	8/15 (53)	17/28 (61)
Received analgesia	24 (24)	32 (51)
Intubated, N (%)	11 (11)	1 (2)
Advance Directive, N (%)		
DNR	14 (14)	11 (17)
Health care proxy	9 (9)	4 (6)

^aCategories are not mutually exclusive and patients could have more than one chief complaint or final ED diagnosis.

^bModerate to severe pain was defined as a score of 6 or greater on the NRS-11.

CHF, congestive heart failure; COPD, chronic obstructive pulmonary disease; DNR, Do Not Resuscitate; ED, emergency department; SD, standard deviation.

on average initiated days into a patient's hospital stay. Patients had a wide range of chief complaints and final diagnoses, including numerous painful conditions that were not consistently treated with analgesics. Information regarding advance care planning was infrequently available from the ED chart, although it is unclear whether this is from a lack of ascertaining the information, lack of documentation, or whether the patient had not made his or her wishes clear.

This study describes important characteristics for ED patients who receive a palliative care consultation. While our findings are not sufficient to understand fully who would benefit from an ED palliative care consult, we believe it is the first step in defining current practice patterns at a medical center with a well-developed palliative care service. Consensus criteria have recently been developed for screening of patients on admission who are likely to be at high risk for have unmet palliative care needs.²⁹ These include patients with a wide range of conditions, including metastatic cancer, cardiac arrest, and end stage liver disease. Next steps might include using these criteria in a prospective study to determine what proportion of seriously ill ED patients with these criteria are currently being screening for palliative care needs.

While our study offers insights into the hospital course for patients who arrive via the ED, it is difficult to know how these data might differ by differing hospital type, geographic locations, or patient characteristics. In addition, the data were collected retrospectively, making it difficult to obtain data regarding the nonphysical domains of palliative care, and to know whether data omitted from the medical chart were simply not documented. With the current data, we are unable to determine the reason for or appropriateness of the timing of palliative care consultation, which will be important to study moving forward. Our small sample size and single study site make it difficult to generalize our results to other hospitals. Nonetheless, we believe the descriptive statistics provide important information that can be used as pilot data by future investigators, by clinicians interested in forging palliative care/emergency medicine partnerships, and by managers interested in developing metrics for palliative care performance improvement projects.

Numerous opportunities exist in the ED to improve documentation of advance directives and improve pain care. Earlier palliative care team involvement in patient care, in some cases as early as in the ED, may clarify patient goals and desires pertaining to treatment and may improve patient care and outcomes. While none of the ED patients in this study were discharged, it is possible that a timely palliative care consultation in the ED could even help avoid admission altogether in select patients. Future prospective studies will further elucidate which ED patients might warrant palliative care consultation. Developing criteria for ED-based palliative care consultation might help address palliative care needs earlier in the hospital course.

Author Disclosure Statement

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