

Center to Advance Palliative Care Inpatient Unit Operational Metrics: Consensus Recommendations

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Abstract

The need to standardize the prospective collection and analysis of data has been a cornerstone of education and technical assistance provided by the Center to Advance Palliative Care (CAPC). Data analysis is vital for strategic planning, quality improvement, and demonstration of program impact to hospital administrators, private funders, and policymakers. To develop a set of core measures, CAPC convened a consensus panel in 2008 to focus on operational metrics for hospital inpatient palliative care units. Operational metrics, as distinct from clinical, customer, and financial metrics, describe the characteristics of patients admitted to an inpatient unit, such as age, disease, location, length of stay, and disposition. The panel arrived at 11 metric domains, all but one of which can be used for either internal programmatic use or for external comparisons of service characteristics/impact between different hospitals. In an effort to ensure access to reliably high-quality palliative care data throughout the nation, hospitals are encouraged to collect and report outcomes for each of the 11 metric domains described here.

Introduction

THE GROWTH OF PALLIATIVE CARE PROGRAMS has been impressive over the past 10 years. The Center to Advance Palliative Care (www.capc.org) and its six Palliative Care Leadership CentersSM (www.capc.org/pclc) have provided outreach and technical assistance to more than 1200 U.S. hospitals during the start and growth of their palliative care programs. As one means of ensuring program quality and sustainability, CAPC faculty have consistently taught that programs must measure key operational, clinical, customer and financial data from the outset of clinical service delivery (Table 1). However, because there is no widely accepted or standard set of metrics for hospital palliative care services, CAPC convened a consensus development process among a range of leaders in the field in an effort to establish common and comparable measures. Previous reports from the CAPC consensus group have included operational features for hospital palliative care programs and operational metrics for hospital consultation services (*Journal of Palliative Medicine*, 2008, 11:1189–1194).

In the summer of 2008 a consensus panel of CAPC staff, consultants, and Palliative Care Leadership CenterSM (PCLC) faculty was convened to answer the following two questions: (1) What inpatient palliative care unit operational metrics should be measured to assist programs as they strive for quality, sustainability and growth? and (2) What inpatient operational metrics can be used to compare service utilization across hospitals? The panel was specifically instructed not to address clinical, customer or financial metrics, as these will be the subject of future consensus projects. The panel included interdisciplinary representation from academic and community hospital settings, clinical and operational program staff, single hospitals and large health systems, adult and pediatric programs, and programs coordinated by hospice agencies and hospitals (see Appendix A).

In considering the options, the panel weighed the ease of data collection/analysis against the utility of particular data features necessary to meet the needs of program staff and hospital administrators. A consensus emerged around 11 do-

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TABLE 1. METRIC CATEGORIES FOR HOSPITAL PALLIATIVE CARE PROGRAMS

<i>Domain</i>	<i>Examples</i>
Operational metrics	Date of consult, diagnosis, referring physician/service, patient age, patient gender, disposition, hospital length of stay
Clinical metrics	Symptom control scores, psychosocial assessment scores
Customer metrics	Satisfaction survey data: patient, family, referring physician
Financial metrics	Daily preconsultation and postconsultation hospital cost, net loss/gain for inpatient deaths, case-mix index

TABLE 2. SUGGESTED PROSPECTIVE DATA ELEMENTS TO ANALYZE INPATIENT UNIT OPERATIONAL DATA

Patient ID#
Patient age, gender, race/ethnicity
Palliative care diagnosis
Referring service and/or referring physician
Date of hospital admission
Date of hospital discharge
Date of PCU admission
Disposition: inpatient death vs. discharge; discharge location
Hospice admissions/discharges
Patient billing status: acute care or hospice pass-through
PCU, palliative care unit.

TABLE 3. PALLIATIVE CARE INPATIENT UNIT METRICS FOR INTERNAL USE (I) AND EXTERNAL COMPARISON (E)

<i>Domain</i>	<i>Measure</i>	<i>Use</i>	<i>Comment</i>
1. Inpatient unit (PCU) admissions		I/E	A
Palliative care admissions ^a	<i>n</i> (%)		
Other admissions	<i>n</i> (%)		
2. Origin of admission		I/E	B
Outside, direct to PCU (nonhospice patient)	<i>n</i> (%)		
Outside, direct to PCU (existing hospice patient)	<i>n</i> (%)		
Emergency department	<i>n</i> (%)		
Intensive care unit	<i>n</i> (%)		
Ward	<i>n</i> (%)		
3. Type of Inpatient unit		I/E	
a. Fixed-bed unit			
Average daily census	<i>n</i>		C
Average % occupancy	<i>n</i>		
OR			
b. Swing-bed unit			
Average daily census	<i>n</i>		D
4. Patient demographics		I/E	
Female	<i>n</i> (%)		
Male	<i>n</i> (%)		
Asian/Pacific Islander	<i>n</i> (%)		
African American/Black	<i>n</i> (%)		
Caucasian	<i>n</i> (%)		
Hispanic/Latino	<i>n</i> (%)		
Native American/Alaskan Native	<i>n</i> (%)		
Other	<i>n</i> (%)		
5. Disease distribution		I/E	E
Cancer	<i>n</i> (%)		
Noncancer	<i>n</i> (%)		
6. Age distribution		I/E	
Adult programs			
Age 18–65	<i>n</i> (%)		
Age > 65	<i>n</i> (%)		
Pediatric programs			
Age 0–1	<i>n</i> (%)		
Age 2–18	<i>n</i> (%)		
7. Referring service and/or physician	<i>n</i> (%)	I	F
8. Discharge distribution		I/E	
Live discharges	<i>n</i> (%)		
Live discharge with hospice services	<i>n</i> (%)		G
Inpatient deaths	<i>n</i> (%)		
Percentage of all hospital deaths on PCU	%		H

TABLE 3. PALLIATIVE CARE INPATIENT UNIT METRICS FOR INTERNAL USE (I) AND EXTERNAL COMPARISON (E) (CONT'D)

Domain	Measure	Use	Comment
9. Patient billing status, at time of: Admission: acute care/hospice pass-through Discharge: acute care/hospice pass-through	%/% %/%	I/E	I
10. Length of stay (LOS)	Time from hospital admission to PCU admission, PCU admission to discharge, and total length of stay (median and mean)	I/E	J
11. Length-of-stay outliers PCU LOS > 14 days	n (%)	I/E	

^aThis number is used as the denominator for the remaining domains.
PCU, palliative care unit.

- A. **Palliative care vs. other admissions:** Palliative care admissions are for patients with an acute or chronic, life-threatening or life-limiting condition, for whom the admission is designed to provide expert assistance with one or more of the following:
- pain/symptom management and/or
 - goal-of-care discussion/decisions and/or
 - patient/family support and/or
 - acute or respite care under a hospice program and/or
 - withdrawal of life-sustaining interventions and/or
 - care during the last days of life
- Palliative care admissions may include patients receiving life-sustaining treatments, for example: antibiotics, artificial hydration/nutrition, blood products or kidney dialysis.
- Other admissions** that fall outside the scope of acute inpatient palliative care admissions, but may be within the scope of a *particular palliative care unit*, include admissions for:
- custodial/domiciliary care
 - chemotherapy administration or management of chemotherapy toxicity
 - other
- B. **Origin of admission:** The admitting source may include direct admissions (not transiting the emergency department) of patients enrolled in hospice programs or nonhospice patients. For in-hospital transfers, record location from either a general medical/surgical ward, intensive care unit or emergency department.
- C. **Fixed-be unit:** This is a unit where the beds are specifically designated only for palliative care patients.
- D. **Swing-bed unit:** This is a unit that includes beds that can be used either for palliative care or general medical/surgical patients. A swing-bed unit may or may not be in one geographic location.
- E. **Disease distribution:** The “disease” is the major underlying (usually terminal) condition leading to hospital/PCU admission. At a minimum, programs should report cancer vs. noncancer diseases. However, programs are encouraged to track subcategories of noncancer diseases for internal use in program planning and impact assessment: *neurologic/neurodegenerative, cardiac, pulmonary, metabolic, gastrointestinal, renal, infectious/immunology, genetic, trauma, vascular, other*.
- F. **Referring service and/or physician:** Data for referring service and/or physician will be institution-specific; that is, it cannot be easily compared across hospitals, since each hospital tends to have unique ways of admitting and classifying admissions (e.g., in some hospitals, stroke patients are admitted to medicine, in others to neurology). Individual programs are encouraged to maintain specific data about their referrers to understand referral patterns and assist in strategic planning.
- G. **Hospice discharges:** This number represents the percentage of PCU live discharges that are discharged with hospice services (Medicare Hospice Benefit or equivalent scope of service).
- H. **Percentage of all inpatient deaths:** This is the total number of PCU deaths divided by the total number of hospital deaths.
- I. **Patient billing status:** PCU patients will typically have the cost of their hospital stay reimbursed through one of two mechanisms: acute care billing, similar to any other acute care patient, or, in the second arrangement, hospitals will have a contracted relationship with a hospice agency for acute inpatient or respite care and receive “pass-through” funding from the hospice agency. Acute care billing includes patients with commercial or government insurance, self-pay, and charity care.
- J. **Day of admission:** For length-of-stay analysis, the day of PCU admission is considered day 0.

TABLE 4. SAMPLE HOSPITAL REPORT: INPATIENT UNIT METRIC

<i>Palliative Care Unit: January–December 2007</i>	
1. Inpatient unit (PCU) admissions	
Palliative care admissions	400 (94%)
Other admissions	25 (6%)
2. Origin of admission	
Outside, direct to PCU (nonhospice)	20 (5%)
Outside, direct to PCU (existing hospice)	30 (8%)
Emergency department	50 (12%)
Intensive care unit	175 (44%)
Ward	125 (31%)
3.a. Fixed-bed unit	
Average daily census	6.1
Average % occupancy	74%
3.b. Swing-bed unit	NA
4. Patient demographics	
Female	210 (52%)
Male	190 (48%)
Asian/Pacific Islander	50 (12%)
African American/Black	100 (25%)
Caucasian	150 (38%)
Hispanic/Latino	90 (22%)
Native American/Alaskan Native	10 (3%)
Other	0 (%)
5. Disease distribution	
Cancer	275 (69%)
Noncancer	125 (31%)
6. Age distribution	
Age 18–65	185 (46%)
Age > 65	215 (54%)
7. Referring service and/or physician	
Internal medicine	30%
Oncology	15%
Surgery	35%
Neurology	10%
Other	10%
8. Discharge distribution	
Live discharges	150 (38%)
Live discharge with hospice services	135 (90%)
Inpatient deaths	250 (62%)
Percentage of all hospital deaths on PCU	45%
9. Patient billing status, at time of:	
Admission: acute care/hospice pass-through	78%/22%
Discharge: acute care/hospice pass-through	65%/35%
10. Length of stay (LOS)	See Table 5
11. Length-of-Stay Outliers	
PCU LOS > 14 days	35 (9%)

PCU, palliative care unit.

mains of operational data that can be derived from a short list of data points programs can gather prospectively (Tables 2 and 3).

All data elements (except one, “Referring Service and/or Physician”) can be used by programs wishing to compare their data with other hospitals. Sample data reports are provided in Tables 4 and 5.

The list of data points included in this report is not

meant to be exhaustive, but represents the core minimum information that the panel thought all hospital palliative care programs should be measuring. This report is not meant to discourage programs from capturing other data as requested by hospital administrators, or that the program director believes would be of use in helping to sustain/grow their program.

Collecting and analyzing program operational data is

TABLE 5. SAMPLE HOSPITAL REPORT: LENGTH-OF-STAY DATA

	n	Admission to PCU (days)		PCU to discharge/death (days)		Total LOS (days)	
		Median	Mean	Median	Mean	Median	Mean
All Hospital admissions	15,245	NA	NA	NA	NA	4	4.8
All PCU admissions	400	3	5.8	4	4.2	7	10.0
Age > 65	215	3	3.4	4	3.7	7	7.1
Age ≤ 65	185	4	4.6	4	2.9	8	7.5
Direct: non-hospice	20	0	0	3	3.4	3	3.4
Direct: hospice	30	0	0	3	4.2	3	4.2
Ward Referral	125	3	4.1	3	3.6	6	7.7
ICU referral	175	6	6.1	5	2.1	11	8.2
ED referral	50	0	0	3	4.3	3	4.3
Cancer	275	2	5.1	3	3.1	5	8.2
Noncancer	125	5	6.2	5	5.8	10	12.0
Live discharge	150	4	4.9	3	6.5	7	11.4
Death	250	2	3.1	4	2.2	6	5.3

PCU, palliative care unit; ICU, intensive care unit; ED, emergency department.

critical for all hospital palliative care programs if we are to work toward the time when all patients in the United States with serious and complex illness can reliably access quality palliative care in their communities. The CAPC is committed to helping hospices and hospitals sustain and strengthen their palliative care programs through the kind of standardization represented by the process of routine, objective, and verifiable data analyses.

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