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Adherence to *Measuring What Matters* Measures Using Point-of-Care Data Collection Across Diverse Clinical Settings

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Abstract

Context. *Measuring What Matters* (MWM) for palliative care has prioritized data collection efforts for evaluating quality in clinical practice. How these measures can be implemented across diverse clinical settings using point-of-care data collection on quality is unknown.

Objectives. To evaluate the implementation of MWM measures by exploring documentation of quality measure adherence across six diverse clinical settings inherent to palliative care practice.

Methods. We deployed a point-of-care quality data collection system, the Quality Data Collection Tool, across five organizations within the Palliative Care Research Cooperative Group. Quality measures were recorded by clinicians or assistants near care delivery.

Results. During the study period, 1989 first visits were included for analysis. Our population was mostly white, female, and with moderate performance status. About half of consultations were seen on hospital general floors. We observed a wide range of adherence. The lowest adherence involved comprehensive assessments during the first visit in hospitalized patients in the intensive care unit (2.71%); the highest adherence across all settings, with an implementation of >95%, involved documentation of management of moderate/severe pain. We observed differences in adherence across clinical settings especially with MWM Measure #2 (Screening for Physical Symptoms, range 45.7%-81.8%); MWM Measure #5 (Discussion of Emotional Needs, range 46.1%-96.1%); and MWM Measure #6 (Documentation of Spiritual/Religious Concerns, range 0-69.6%).

Conclusion. Variations in clinician documentation of adherence to MWM quality measures are seen across clinical settings. Additional studies are needed to better understand benchmarks and acceptable ranges for adherence tailored to various clinical settings. J Pain Symptom Manage 2016;51:497–503. © 2016 American Academy of Hospice and Palliative Medicine. Published by Elsevier Inc. All rights reserved.

Key Words

Quality, quality measures, Measuring What Matters, implementation, alliance, collaboratives

Introduction

There is limited understanding of how to implement palliative care quality measures into routine quality initiatives across patient populations and clinical settings.^{1–3} The American Academy of Hospice and Palliative Medicine and Hospice and Palliative Care Nurses Association recently convened panels of

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technical and clinical experts to produce a set of prioritized measures for the field. The goal of *Measuring What Matters* (MWM)⁴ was to provide the field of hospice and palliative medicine with a select set of valid and implementable quality indicators to measure quality of care. Such a select set is expected to support regular quality assessment and measurement within individual palliative care organizations. Data from these efforts have the potential to inform establishment of benchmarks and collaborative quality improvement efforts.

As the MWM initiative proposed a list of 10 quality measures, significant unanswered questions remain. First, how do these measures perform in the diverse settings and patient populations for whom palliative care is appropriate? Second, how does adherence to these measures compare across these settings? These remain unanswered questions for a few key reasons. One reason is that the MWM measures were only recently defined; experiences with integrating these measures are relatively recent. Additionally, each component measure of MWM was tested and validated in a patient population defined by a specific diagnosis or setting using retrospective chart abstraction. For example, MWM Measure #9 (Care Consistency with Documented Care Preferences) was developed for and tested within a hospitalized patient population.⁵ We do not yet know how clinicians will use these measures in other settings, like outpatient clinics. Another example is MWM Measure #1, which recommends a "comprehensive assessment" for all patients evaluated by the team. This measure was included from the set of "Prepare, Embrace, Attend, Communicate, Empower" (PEACE) measures,^b which was developed to evaluate quality of care of patients with acute care or end-of-life needs admitted to services (e.g., hospice or hospital admission). It remains unknown how clinicians may adhere to this measure in outpatient settings, where needs may be more focused and clinical interactions may be spread over time. As clinical palliative care continues to grow in noninpatient settings such as community-based delivery⁷ and outpatient clinics,⁸ the field is beginning to appreciate the differences in palliative care delivery among varied settings and the implications for quality measurement.

To better understand the performance of quality measures across different clinical settings, we examined MWM measure adherence using a point-of-care data collection method in a large and diverse patient population from five Palliative Care Research Cooperative Group (PCRC) member sites.

Methods

We conducted a cross-sectional descriptive study of quality measure implementation across patients

consulted for specialty palliative care. We included data entered prospectively into the Quality Data Collection Tool (QDACT) electronic system by palliative care clinicians from January 2, 2014, to September 16, 2015. This study was performed within an overall series of investigations to assess the usability and feasibility of a new QDACT platform for the PCRC. This investigation was approved by Duke University (Pro00035703, Pro00055212) and, when applicable, participating organizations' institutional review boards.

Settings

This study was conducted within the PCRC, a multisite research infrastructure to support and coordinate clinical research in palliative care.⁹ Data collected from five PCRC organizations were analyzed. Organizations included four academic sites and one community-based site. Organizations each a priori devised a sampling technique to identify and collect data on patients. Investigators worked with their clinical teams to develop a sampling recruitment strategy to collect data generalizable to the entire practice.¹⁰ Data were collected across six common clinical settings of palliative care.

Study Design

We designed this cross-sectional multisite study to generate descriptive data on adherence to the MWM measures.⁴ We compared adherence to quality measures across six types of palliative care clinical settings: hospital general floor, hospital intensive care unit (ICU), emergency department, outpatient, long-term care, and home. In an additional analysis, all hospital-based palliative care consultations, including those from the general floor, ICU, and emergency department, were aggregated into one category: "acute care." All others, including outpatient palliative care clinics, home-based palliative care consultations, and long-term care facility palliative care visits were aggregated into "nonacute care." Palliative care visits that were coded as "other" were treated as nonacute care.

Instrument

Clinicians used the QDACT tool to collect near real-time clinical data across the eight domains of quality palliative care proposed by the National Consensus Project for Quality Palliative Care.¹¹ By using the QDACT, clinicians can report data on up to 82% of all quality measures in the field, including nine of the MWM measures.¹ The QDACT is a clinician-entered, point-of-care quality assessment tool that includes commonly used validated clinical instruments (e.g., Edmonton Symptom Assessment System,¹² Palliative Performance Scale¹³) when available and consensus-based clinical assessments linked to quality measures derived from the QDACT user panel. Data are entered electronically by clinicians, research assistants, and support staff through a tablet, or desktop computer via a Web-based interface by clinicians either during or immediately after a patient encounter. Completion of these instruments informs quality measure adherence. For example, if a clinician enters an Edmonton Symptom Assessment System pain score of 4, then the system records adherence to MWM #2 (Screening of Symptoms). The system uses color-based decision support to alert clinicians if quality measure adherence is not achieved. Further details about the QDACT approach¹⁴ and the rapid learning integration of data on quality are covered elsewhere.¹⁵

Measures

We evaluated adherence to best practices as represented in the MWM set across nine of the possible 10 measures (Table 1). As the QDACT is designed as a clinician-reported instrument, the 10th MWM measure, patient and family assessments of care, is not included in the QDACT but was introduced elsewhere in this *IPSM* Special Series.¹⁶ Although some MWM measures may specify use in specific palliative care settings (e.g., acute hospitalization >1 day), we applied the measures to all clinical settings (e.g., outpatient, long-term care, home, hospital) in which palliative care was provided during the data collection period. Denominators for measure assessment were all patients evaluated by a palliative care specialist and entered into the QDACT registry during a first clinical visit. For MWM Measure #9 (Care Consistency with Documented Care Preferences), this denominator was limited to patient's age of 65 years or more. Numerators are described in the following.

Definitions of MWM Measure Adherence

For all measures, we evaluated all clinical encounters entered into the registry. Missing or incorrectly answered data were counted as not meeting the measure.

For Measure #1 (Comprehensive Assessment), the measure was met if there was at least one documented assessment in the QDACT across each of five domains: physical, social, psychological, functional, and spiritual. Additionally, providers had to record an assessment of family burden, overall well-being, a one-question spiritual distress screen, performance status, and at least four symptoms. This definition was derived from QDACT users through consensus building before the investigation. For Measures #2 (Screening for Physical Symptoms), #3 (Pain Treatment), #4 (Dyspnea Screening and Management), and #7 (Documentation of Surrogate), we used the original measure definitions of numerators and denominators from the measure source documents without modification.

For Measure #5 (Discussion of Emotional or Psychological Needs), clinicians met this measure if an anxiety or depression screen had been performed.

For Measure #6 (Discussion of Spiritual/Religious Concerns), we used a one-question instrument ("Are you at peace?")¹⁷ as a proxy for a discussion of spiritual/religious concerns having occurred, which met criteria for measure adherence.

For Measure #8 (Treatment Preferences), the measure was met if either resuscitation status or presence of an advance directive was indicated.

For Measure #9 (Care Consistency with Documented Care Preferences), we evaluated whether resuscitation preferences were documented in vulnerable elders (age >65 years).

Statistical Analysis

We computed descriptive statistics and compared quality measure adherence between hospital and nonhospital settings. We used Fisher exact test with two-tailed *P*-values for comparison testing.

Results

During the study period, we enrolled 2242 patients into the PCRC QDACT quality registry. Across these patients, 4893 total encounters were recorded, including 1989 first visits, 1265 second visits, 643 third visits, and 385 fourth or later visits. Only first visits were included for analysis (Table 2). Our population was mostly white, female, and with moderate performance status. About half (52%) of consultations were seen on hospital general floors.

We observed a wide range of adherence to MWM measures across the various clinical settings that are typical to palliative care delivery (Table 1). Excluding the emergency department because of a small number of observations, the lowest adherence involved comprehensive assessments during the first visit for hospitalized patients in the ICU (2.71%); the highest adherence across all settings, with an implementation of >95%, involved documentation of management of moderate/severe pain. We observed differences in implementation across clinical settings especially with MWM Measure #2 (Screening for Physical Symptoms; range 45.7%-81.8%), MWM Measure #5 (Discussion of Emotional Needs; range 46.1%-96.1%), and MWM Measure #6 (Documentation of Spiritual/Religious Concerns; range 0-69.6%). We compared acute

		Measu	re Feasibility by	Adherence Rate	and Location of	Consultation			
	ED	Hospital General Floor	Hospital Intensive Care	Home	Long-Term Care	Outpatient	All Acute Care	All Nonacute Care	<i>P</i> -value on Acute Care vs. Non-acute Care
MWM #1: Palliative care and hospice patients receive a comprehensive assessment (physical, psychological, social, spiritual, and functional) soon after admission	0.00% (0/5)	7.26% (75/1033)	2.71% (7/258)	34.81% (47/135)	22.84% (98/429)	41.09% (53/129)	6.33% (82/1296)	28.75% (198/693)	<0.0001
WWM #2: Seriously ill palliative care and hospice patients are screened for pain, shortness of breath, nausea, and constipation during the admission visit	60.00% (3/5)	56.15% (580/1033)	45.74% (118/258)	81.48% (110/135)	61.54% (264/429)	71.32% (92/129)	54.09% (710/1296)	67.24% (466/693)	<0.001
MWM #3: Seriously ill palliative care and hospice patients who screen positive for at least moderate pain receive treatment (medication or other) within 94 hours	No patients met denominator criteria	98.94% (280/283)	97.30% (36/37)	96.97% (32/33)	100% (90/90)	95.52% (64/67)	98.75% (316/320)	97.89% (186/190)	NS
MWM #4: Patients with advanced or life- threatening illness are screened for shortness of breath and, if positive to at least a moderate degree, have a plan	No patients met denominator criteria	87.50% (133/152)	91.67% (44/48)	93.75% (30/32)	97.06% (33/34)	75.53% (24/34)	88.50% (177/200)	88.00% (88/100)	NS
MWM #5: Seriously ill palliative care and hospice patients have a documented discussion regarding	60.00% (3/5)	56.82% (587/1033)	46.12% (119/258)	79.26% (107/135)	60.61% (260/429)	96.12% (124/129)	54.71% (709/1296)	70.85% (491/693)	<0.0001
MWM #6: Hospice patients have a documented discussion of spiritual concerns or preference not to discuss them	0.00% (0/5)	18.01% (186/1033)	12.02% (31/258)	69.63% (94/135)	25.26% (156/429)	56.69% (77/129)	16.74% (217/1296)	47.19% (327/693)	<0.0001
MWM #7: Seriously ill palliative care and hospice patients have documentation of the surrogate decision-maker's name (such as the person who has health care power of attorney) and contact information, or absence of a surrogate	100% (5/5)	89.93% (929/1033)	93.41% (241/258)	87.41% (118/135)	89.04% (382/429)	72.87% (94/129)	90.66% (1175/1296)	85.71% (594/693)	0.001

	Table 1								
easure	Feasibility	by Ad	herence	Rate	and	Location	of	Consultat	ion

< 0.001

72.02% (744/1033) 97.67% (252/258) 91.11% (123/135) 98.14% (421/429) 92.25% (119/129) 77.24% (1001/1296) 95.67% (663/693)

100% (5/5)

100% (5/5)

sustaining treatments MWM #9: Vulnerable elders

documentation of their

preferences for life-

palliative care and hospice patients have

MWM #8: Seriously ill

or withdraw life-sustaining

treatments have their preferences followed

preferences to withhold

with documented

MWM = Measuring What Matters; NS = nonsignifican

	Table 2						
Z							
	Total patients enrolled	2242					
33)	Total n first visits	1989					
3/2	Gender, n (%)	1000 (55)					
800	Female	1228 (55)					
	Male	961 (43)					
12	Left blank	53 (2)					
5.3	Kace	1505 (51)					
6	White	1595(71)					
	Black of African American	247 (11)					
20	Asian	36 (2)					
26/7	American Indian, Alaska Native, Native Hawaiian, or other Pacific Islander	9 (0.4)					
2	Other	39 (2)					
2%	Not reported	316(16)					
30.0	Primary diagnosis at first visit						
96	Cancer	607(31)					
	Neurologic	405 (20)					
6	Cardiovascular	320 (16)					
2	Pulmonary	219 (11)					
(44	Infectious	144 (7)					
2	Other diagnosis	114 (6)					
50 0	Gastrointestinal	91 (5)					
38.0	Renal	76 (4)					
~	Unknown	12 (1)					
(02	PPS						
23	0 - 30	484 (24)					
361	40-60	1089(55)					
	≥ 70	241 (12)					
2%	Unknown	175 (9)					
7.5	Location of consultation						
6	Hospital—general floor	1031 (52)					
60	Long-term care	429 (22)					
Ę	Hospital ICU	258 (13)					
03	Home	135 (7)					
1	Outpatient	129 (6)					
8	Emergency department	5 (0.3)					
E.	Other	2(0.1)					
16							
6	PPS, Palliative Performance Scale; ICU, intensive care unit						
13							
20							
(15							
8	and nonacute care settings across six of tr	ie nine stud-					
84	ied measures, with a higher implementa	ation rate in					
97.	nonacute care settings except for MWM	Measure #7					
	$(D_{1}, \dots, t_{n}, t_{n})$	41					
(4)	(Documentation of Surrogate), where	mere was a					
/0:	higher implementation rate in acute care	e settings.					
887	· •	-					
<u></u>							
%							
3t. 0.6	Discussion						
5 E							

We observed overall high adherence to most MWM measures, with notable exceptions involving comprehensive assessments, documentation of spiritual concerns, and documentation of emotional needs. We observed significant differences in adherence to six of the nine MWM measures across acute care and non-acute care locations.

The finding of variable implementation of quality measures across diverse palliative care clinical settings is not surprising. For example, the varied implementation of comprehensive assessments may reflect how clinicians value knowing information across multiple domains early in the therapeutic relationship. A multidomain assessment may not be a priority at the initial assessment in acute care settings, where more pressing issues may take precedence. Patients seen for palliative care consultation in hospital settings are commonly discharged to systems of care that take a comprehensive approach, such as home hospice care.¹⁸ Thus, we may be observing inpatient teams deferring more comprehensive assessments to their hospice colleagues while focusing their care on limited reasons for consultation as guided by the referring clinician. This may fall within the concept of "good consultation etiquette,"19 which involves trading off comprehensiveness for meeting the needs of the referring team. Additionally, inpatient teams may be focusing their assessments and management on care not measured by current quality measures, such as goal setting and discharge planning.²⁰ These teams may use their valuable and often limited time to address those issues critical to resolving the acute episode and then facilitating goals of care evaluations and discharge. In making this trade-off, hospital clinicians may be indicating that this specific measure is not the most feasible, prudent, or efficient way to evaluate the quality of palliative care delivered in this setting.

This investigation highlights several challenges in evaluating quality measure feasibility across varied palliative care clinical settings. One such challenge is balancing the strict definitions of the numerator and denominator of a measure with readily available data within a registry. Clinical teams may need to make measurement adaptations to fit the data collected. For example, the PEACE measure of comprehensive assessment allows up to five days to meet the measure; our analysis was limited to the first visit. This was a result of the inherent limitations of our registry, including significant missingness in some of our follow-up data that precluded examining longitudinal changes in measure adherence. Another challenge is matching care delivered by palliative care teams with what was documented in QDACT. For this study, it is not possible to know if lack of adherence to a measure truly reflects lack of care delivery or failure to document. Movements toward a rapid learning health system leverages other data inputs like patient-reported data to complement clinician-entered data and provide a more comprehensive view of the quality of care delivered. More sources of data on quality, in the era of Medicare Access and CHIP Reauthorization Act legislation, will be needed. Patient-reported quality of care beyond patient satisfaction is currently nascent but a rapidly evolving area across all medicine as patient-reported outcomes measurement becomes ubiquitous.²¹

We have a few important limitations to note. First, we did not collect patient-reported outcomes

measures. Consequently, we could not evaluate how care preferences were followed near the end of life or how patients or families felt about their care (e.g., patient or family assessment of quality). We used a proxy assessment, which was documentation of care preferences, without truly knowing the extent to which documented care preferences were followed. Second, because the registry does not include patient-reported data, we relied on clinician assessment during data collection to draw conclusions. The Hawthorne effect (clinicians-modifying behaviors because of the data collection process) is not measurable and likely contributes to some overestimations of quality measure adherence. Furthermore, clinicians may have performed a clinical process but not documented as such; this study evaluates only those that were documented in the QDACT system. Third, for this study, we did not test feasibility of this data collection process. This was performed in a separate study and will be presented in a subsequent report.

Conclusions

Quality measurement in palliative care is a rapidly evolving area. In response to various national-level changes in value-based care, including Medicare Access and CHIP Reauthorization Act legislation, palliative care practices will be more responsible than ever to collect, report, and respond to data on quality. Integrating data collection practices for measuring quality into usual care delivery will be essential to reduce downstream burden on clinicians from retrospective data abstraction while also empowering clinicians to improve quality simultaneous to care delivery. Data will need to be actionable by busy clinicians near point of care and lead to meaningful changes in palliative care delivery that respond to the unique environments and stressors of serious illness care. The feasibility of such efforts will need to be closely studied. Such studies will add to our understanding of how this can best occur within the complex and busy environments of palliative care delivery.

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