

NATIONAL QUALITY FORUM

Measure Submission and Evaluation Worksheet 5.0

This form contains the information submitted by measure developers/stewards, organized according to NQF's measure evaluation criteria and process. The evaluation criteria, evaluation guidance documents, and a blank online submission form are available on the [submitting standards web page](#).

| NQF #: 1638 | NQF Project: Palliative Care and End-of-Life Care |
|---|---|
| (for Endorsement Maintenance Review) | |
| Original Endorsement Date: | Most Recent Endorsement Date: |
| BRIEF MEASURE INFORMATION | |
| De.1 Measure Title: Hospice and Palliative Care -- Dyspnea Treatment | |
| Co.1 Measure Steward: University of North Carolina- Chapel Hill 725 Martin Luther King Jr Blvd, CB 7590 Chapel Hill North Carolina 27599-7590 | |
| De.2 Brief Description of Measure: Percentage of patients who screened positive for dyspnea who received treatment within 24 hours of screening. | |
| 2a1.1 Numerator Statement: Patients who screened positive for dyspnea who received treatment within 24 hours of screening. | |
| 2a1.4 Denominator Statement: Patients enrolled in hospice for 7 or more days OR patients receiving palliative care who report dyspnea when dyspnea screening is done on the admission evaluation / initial encounter. | |
| 2a1.8 Denominator Exclusions: Palliative care patients with length of stay < 1 day or hospice patients with length of stay < 7 days, patients who were not screened for dyspnea, and/or patients with a negative screening. | |
| 1.1 Measure Type: Process | |
| 2a1. 25-26 Data Source: Electronic Clinical Data | |
| 2a1.33 Level of Analysis: Clinician : Group/Practice, Facility | |
| 1.2-1.4 Is this measure paired with another measure? Yes 1640 Hospice and Palliative Care -- Dyspnea Screening and Dyspnea Treatment | |
| De.3 If included in a composite, please identify the composite measure (title and NQF number if endorsed): Part of the PEACE Measure Set | |
| Paired with Hospice and Palliative Care – Dyspnea Screening | |
| Percentage of hospice or palliative care patients who were screened for dyspnea during the hospice admission evaluation / palliative care initial encounter. | |

| STAFF NOTES <i>(issues or questions regarding any criteria)</i> |
|--|
| Comments on Conditions for Consideration: |
| Is the measure untested? Yes <input type="checkbox"/> No <input type="checkbox"/> If untested, explain how it meets criteria for consideration for time-limited endorsement: |
| 1a. Specific national health goal/priority identified by DHHS or NPP addressed by the measure (check De.5): |
| 5. Similar/related endorsed or submitted measures (check 5.1): |
| Other Criteria: |
| Staff Reviewer Name(s): |

| 1. IMPACT, OPPORTUNITY, EVIDENCE - IMPORTANCE TO MEASURE AND REPORT |
|---|
| Importance to Measure and Report is a threshold criterion that must be met in order to recommend a measure for endorsement. All |

three subcriteria must be met to pass this criterion. See [guidance on evidence](#).
Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria.
[\(evaluation criteria\)](#)

1a. High Impact: H M L I

(The measure directly addresses a specific national health goal/priority identified by DHHS or NPP, or some other high impact aspect of healthcare.)

De.4 Subject/Topic Areas *(Check all the areas that apply):*

De.5 Cross Cutting Areas *(Check all the areas that apply):* [Palliative Care and End of Life Care](#)

1a.1 Demonstrated High Impact Aspect of Healthcare: [Affects large numbers; Patient/societal consequences of poor quality; Severity of illness](#)

1a.2 If "Other," please describe:

1a.3 Summary of Evidence of High Impact *(Provide epidemiologic or resource use data):*

The Hospice and Palliative Care Dyspnea Treatment measure addresses dyspnea for patients with high severity of illness and risk of death, including seriously and incurably ill patients enrolled in hospice or hospital-based palliative care. Research on care of patients nearing the end of life shows they experience high rates of physical, emotional, and spiritual causes of distress.(1,2) The National Priorities Partnership has identified palliative and end-of-life care as one of its national priorities. A goal of this priority is to ensure that all patients with life-limiting illness have access to effective treatment for symptoms such as pain and shortness of breath.(3) In 2009, 1.56 million people with life-limiting illness received hospice care.(4) In 2008, 58.5% of US hospitals with 50 or more beds had some form of palliative care service, and national trends show a steady expansion of these services. (5) Dyspnea is a common symptom in serious illness, more common than pain for patients with chronic obstructive lung disease, lung cancer, cystic fibrosis, and restrictive lung diseases such as pulmonary fibrosis.(6) Unlike pain, dyspnea severity is associated with the risk of death.(7) Between 50-70% of patients with advanced lung cancer experience dyspnea near the end of life. As detailed in a recent systematic review, opioids, oxygen and non-pharmacologic nursing interventions demonstrate efficacy in randomized controlled trials of treatment for dyspnea in cancer and in other serious illness.(8,9) Unfortunately, dyspnea is often persistent and under-treated in advanced cancer and other end-stage diseases.(10)

1a.4 Citations for Evidence of High Impact cited in 1a.3: 1. The Writing Group for the SUPPORT Investigators. A controlled trial to improve care for seriously ill hospitalized patients. The study to understand prognosis and preferences for outcomes and risks of treatments (SUPPORT). JAMA. 1995;274:1591-1598.

2. Gade G, Venohr I, Conner D, et al. Impact of an inpatient palliative care team: a randomized control trial. J Palliat Med. 2008;11(2):180-190.

3. <http://www.nationalprioritiespartnership.org/PriorityDetails.aspx?id=608>

4. NHPCO Facts and figures: hospice care in America 2010 edition

http://www.nhpc.org/files/public/Statistics_Research/Hospice_Facts_Figures_Oct-2010.pdf

5. Center to Advance Palliative Care <http://www.capc.org/news-and-events/releases/04-05-10>

6. Luce JM, Luce JA. Management of dyspnea in patients with far-advanced lung disease. JAMA 2001; 285:1331-1337.

7. Olajidae O, Hanson LC, Usher BM et al. Validation of the Palliative Performance Score in the acute tertiary hospital setting. J Palliat Med 2007; 10:111-117

8. Ben-Aharon I, Gafer-Gvili A, Paul M et al. Interventions for alleviating cancer-related dyspnea: a systematic review. J Clin Oncol 2008; 26:2396-2404.

9. Lorenz KA, Lynn J, Dy SM et al. Evidence for improving palliative care at the end of life: a systematic review. Ann Intern Med 2008; 148:147-159.

10. Roberts DK, Thorne SE, Pearson C. Cancer Nurs 1993; 16:310-320.

1b. Opportunity for Improvement: H M L I

(There is a demonstrated performance gap - variability or overall less than optimal performance)

1b.1 Briefly explain the benefits (improvements in quality) envisioned by use of this measure:

Dyspnea is prevalent and undertreated for many populations of seriously ill patients, including those patients nearing the end of life. Screening for dyspnea is necessary to determine its presence and severity, and forms the basis for treatment decision-making. Unlike pain, structured clinical assessment of the symptom is less well-defined, yet similar to pain, effective treatment is available to

alleviate symptom distress.

1b.2 Summary of Data Demonstrating Performance Gap (*Variation or overall less than optimal performance across providers*): **[For Maintenance** – Descriptive statistics for performance results *for this measure* - distribution of scores for measured entities by quartile/decile, mean, median, SD, min, max, etc.]

Prevalence of dyspnea in advanced cancer ranges from 50-70%. Among COPD patients with advanced illness enrolled in the SUPPORT Study, dyspnea which was moderate to severe at least half of the time was present for at least 65% of patients throughout the 6 months preceding death.

Effective treatment for dyspnea is available, but not consistently administered. Evidence-based treatments include pharmacologic interventions such as opioids and inhaled bronchodilators, and non-pharmacologic interventions including oxygen for hypoxic patients, pulmonary rehabilitation and exercise in COPD, and drainage of pleural effusion.

1b.3 Citations for Data on Performance Gap: **[For Maintenance** – Description of the data or sample for measure results reported in 1b.2 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included]

1. Luce JM, Luce JA. Management of dyspnea in patients with far-advanced lung disease. JAMA 2001; 285:1331-1337.
2. Ben-Aharon I, Gafer-Gvili A, Paul M et al. Interventions for alleviating cancer-related dyspnea: a systematic review. J Clin Oncol 2008; 26:2396-2404.
3. Roberts DK, Thorne SE, Pearson C. Cancer Nurs 1993; 16:310-320.
4. Currow DC, Ward AM, Abernethy AP. Advances in the pharmacologic management of breathlessness. Current Opin Supp Pall Care 2009; 3:103-106.
5. Bausewin C, Booth S, Gysels M et al. Non-pharmacologic interventions for breathlessness in advanced stages of malignant and nonmalignant diseases. Cochrane Database Syst Rev 2009. Apr 16; 2:CD005623.
6. Lorenz KA, Lynn J, Dy SM et al. Evidence for improving palliative care at the end of life: a systematic review. Ann Intern Med 2008; 148:147-159.
7. Dy SM, Lorenz KA, Naeim A et al. Evidence-based recommendations for cancer fatigue, anorexia, depression and dyspnea. J Clin Onc 2008; 26:3886-3895.

1b.4 Summary of Data on Disparities by Population Group: **[For Maintenance** –Descriptive statistics for performance results *for this measure* by population group]

Limited research has explored the nature of health disparities in the experience of dyspnea or in dyspnea management. One observational study of dyspnea in cancer patients provides evidence that dyspnea and other symptoms, in addition to minority race / ethnicity, independently predict worsened survival.

1b.5 Citations for Data on Disparities Cited in 1b.4: **[For Maintenance** – Description of the data or sample for measure results reported in 1b.4 including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included]

Tammemagi CM, Neslund-Dudas C, Simoff M, Kvale P. Lung carcinoma symptoms – an independent predictor of survival and an important mediator of African-American health disparity in survival. Cancer. 2004 Oct 1;101(7):1655-63.

1c. Evidence (*Measure focus is a health outcome OR meets the criteria for quantity, quality, consistency of the body of evidence.*)
 Is the measure focus a health outcome? Yes No **If not a health outcome, rate the body of evidence.**

Quantity: H M L I Quality: H M L I Consistency: H M L I

| Quantity | Quality | Consistency | Does the measure pass subcriterion1c? |
|----------|---------|-------------|---|
| M-H | M-H | M-H | Yes <input type="checkbox"/> |
| L | M-H | M | Yes <input type="checkbox"/> IF additional research unlikely to change conclusion that benefits to patients outweigh harms; otherwise No <input type="checkbox"/> |
| M-H | L | M-H | Yes <input type="checkbox"/> IF potential benefits to patients clearly outweigh potential harms; otherwise No <input type="checkbox"/> |
| L-M-H | L-M-H | L | No <input type="checkbox"/> |

Health outcome – rationale supports relationship to at least one healthcare structure, process, intervention, or service

Does the measure pass subcriterion1c?
 Yes IF rationale supports relationship

1c.1 Structure-Process-Outcome Relationship (Briefly state the measure focus, e.g., health outcome, intermediate clinical outcome, process, structure; then identify the appropriate links, e.g., structure-process-health outcome; process- health outcome; intermediate clinical outcome-health outcome):

Dyspnea screening and assessment are necessary to detect the presence of dyspnea (for which physical signs such as hypoxia and tachypnea do not clearly correlate), and to understand its severity and underlying etiology. Evidence-based treatment of dyspnea will vary with its severity and etiology, with treatment options differing for causes such as malignant pleural effusion, bulky tumor mass, congestive heart failure, anemia, COPD, among others. Additional guidelines from the American College of Physicians recommend dyspnea screening and assessment. Additional evidence includes numerous systematic reviews.

1c.2-3 Type of Evidence (Check all that apply): Clinical Practice Guideline; Systematic review of body of evidence (other than within guideline development)

1c.4 Directness of Evidence to the Specified Measure (State the central topic, population, and outcomes addressed in the body of evidence and identify any differences from the measure focus and measure target population):

Dyspnea is a prevalent, distressing and functionally limiting symptom common to many serious illness conditions, and associated with risk of death.

- a) Combining the results of several systematic reviews, moderate evidence supports pharmacologic treatments, including opioids for treatment of dyspnea in cancer and non-cancer diagnoses, and inhaled beta agonists for COPD.
- b) Combining the results of several systematic reviews, moderate evidence supports non-pharmacologic treatments, including oxygen for hypoxic patients with cancer and non-cancer diagnoses, exercise interventions for COPD and CHF, thoracentesis for malignant pleural effusions, and nurse-led coping or relaxation interventions in cancer dyspnea.

1c.5 Quantity of Studies in the Body of Evidence (Total number of studies, not articles): 1. Systematic review of dyspnea treatment in palliative care (Lorenz, 2008); reported on 7 systematic reviews and 12 additional individual studies.
2. Systematic review of dyspnea management in cancer care, with evidence included for other diagnoses (D

1c.6 Quality of Body of Evidence (Summarize the certainty or confidence in the estimates of benefits and harms to patients across studies in the body of evidence resulting from study factors. Please address: a) study design/flaws; b) directness/indirectness of the evidence to this measure (e.g., interventions, comparisons, outcomes assessed, population included in the evidence); and c) imprecision/wide confidence intervals due to few patients or events):

- a) Multiple randomized trials of varied quality support the use of opioids for breathlessness; follow-up times are generally short, and evidence is stronger for COPD than for cancer patients.
- b) Multiple randomized trials support the use of beta agonists for dyspnea in COPD
- c) Several randomized trials support the use of oxygen, with mixed results and stratification showing beneficial effects for hypoxic but not for non-hypoxic patients.
- d) Several small trials provide early evidence for the benefit of coping or relaxation interventions.

1c.7 Consistency of Results across Studies (Summarize the consistency of the magnitude and direction of the effect): Results are consistent across trials and systematic reviews.

1c.8 Net Benefit (Provide estimates of effect for benefit/outcome; identify harms addressed and estimates of effect; and net benefit - benefit over harms):

Benefits outweigh harms. Few harms of dyspnea screening or assessment are reported, few harms of treatment are reported.

1c.9 Grading of Strength/Quality of the Body of Evidence. Has the body of evidence been graded? Yes

1c.10 If body of evidence graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias: Overall moderate quality (see Lorenz, 2008)

1c.11 System Used for Grading the Body of Evidence: GRADE

1c.12 If other, identify and describe the grading scale with definitions:

1c.13 Grade Assigned to the Body of Evidence: Varied

1c.14 Summary of Controversy/Contradictory Evidence: *N/A*

1c.15 Citations for Evidence other than Guidelines (*Guidelines addressed below*):

1. Luce JM, Luce JA. Management of dyspnea in patients with far-advanced lung disease. *JAMA* 2001; 285:1331-1337.
2. Ben-Aharon I, Gafer-Gvili A, Paul M et al. Interventions for alleviating cancer-related dyspnea: a systematic review. *J Clin Oncol* 2008; 26:2396-2404.
3. Roberts DK, Thorne SE, Pearson C. *Cancer Nurs* 1993; 16:310-320.
4. Currow DC, Ward AM, Abernethy AP. Advances in the pharmacologic management of breathlessness. *Current Opin Supp Pall Care* 2009; 3:103-106.
5. Bausewin C, Booth S, Gysels M et al. Non-pharmacologic interventions for breathlessness in advanced stages of malignant and nonmalignant diseases. *Cochrane Database Syst Rev* 2009. Apr 16; 2:CD005623.
6. Lorenz KA, Lynn J, Dy SM et al. Evidence for improving palliative care at the end of life: a systematic review. *Ann Intern Med* 2008; 148:147-159.
7. Dy SM, Lorenz KA, Naeim A et al. Evidence-based recommendations for cancer fatigue, anorexia, depression and dyspnea. *J Clin Onc* 2008; 26:3886-3895.
8. Lorenz KA, Lynn J et al. End-of-life care and outcomes. AHRQ Publication No. 05-E004-2, December 2004.

1c.16 Quote verbatim, the specific guideline recommendation (*Including guideline # and/or page #*):

Guideline 2.1 Pain, other symptoms, and side effects are managed based upon the best available evidence, with attention to disease-specific pain and symptoms, which is skillfully and systematically applied.

•Regular, ongoing assessment of pain, non-pain symptoms (including but not limited to shortness of breath, nausea, fatigue and weakness, anorexia, insomnia, anxiety, depression, confusion, and constipation), treatment side effects, and functional capacities are documented through a systematic process. Validated instruments, where available, should be utilized. Symptom assessment in children and cognitively impaired patients should be performed by appropriately trained professionals with appropriate tools.

1c.17 Clinical Practice Guideline Citation: National Quality Forum: A National Framework and Preferred Practices for Palliative and Hospice Care Quality. Washington, D.C.: National Quality Forum 2006. (Review and endorsement of National Consensus Project for Quality Palliative Care. Clinical Practice Guidelines for Quality Palliative Care 2004.)

1c.18 National Guideline Clearinghouse or other URL: Citation: National Guideline Clearinghouse
<http://www.guideline.gov/content.aspx?id=14423>

1c.19 Grading of Strength of Guideline Recommendation. Has the recommendation been graded? *No*

1c.20 If guideline recommendation graded, identify the entity that graded the evidence including balance of representation and any disclosures regarding bias:

1c.21 System Used for Grading the Strength of Guideline Recommendation: *Other*

1c.22 If other, identify and describe the grading scale with definitions: *Not graded*

1c.23 Grade Assigned to the Recommendation:

1c.24 Rationale for Using this Guideline Over Others: The National Consensus Project for Quality Palliative Care was the first United States national guidelines development project for palliative care quality, inclusive of hospice care. This set of guidelines, along with 38 preferred practices, has been rigorously reviewed and endorsed by the National Quality Forum. Although specific investigative groups and specialty organizations have published other guidelines in pain management or hospice or palliative care practice for specific settings or populations, none have been as comprehensive or comprehensively debated, peer reviewed, or NQF endorsed.

Based on the NQF descriptions for rating the evidence, what was the developer's assessment of the quantity, quality, and consistency of the body of evidence?

1c.25 Quantity: *High* 1c.26 Quality: *Moderate* 1c.27 Consistency: *High*

Was the threshold criterion, *Importance to Measure and Report*, met?

(1a & 1b must be rated moderate or high and 1c yes) Yes No

Provide rationale based on specific subcriteria:

For a new measure if the Committee votes NO, then STOP.

For a measure undergoing endorsement maintenance, if the Committee votes NO because of 1b. (no opportunity for improvement), it may be considered for continued endorsement and all criteria need to be evaluated.

2. RELIABILITY & VALIDITY - SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (evaluation criteria)

Measure testing must demonstrate adequate reliability and validity in order to be recommended for endorsement. Testing may be conducted for data elements and/or the computed measure score. Testing information and results should be entered in the appropriate field. Supplemental materials may be referenced or attached in item 2.1. See [guidance on measure testing](#).

S.1 Measure Web Page (In the future, NQF will require measure stewards to provide a URL link to a web page where current detailed specifications can be obtained). Do you have a web page where current detailed specifications for this measure can be obtained? Yes

S.2 If yes, provide web page URL: PEACE Project <http://www.thecarolinascenter.org/default.aspx?pageid=24>

2a. RELIABILITY. Precise Specifications and Reliability Testing: H M L I

2a1. Precise Measure Specifications. (The measure specifications precise and unambiguous.)

2a1.1 Numerator Statement (Brief, narrative description of the measure focus or what is being measured about the target population, e.g., cases from the target population with the target process, condition, event, or outcome):

Patients who screened positive for dyspnea who received treatment within 24 hours of screening.

2a1.2 Numerator Time Window (The time period in which the target process, condition, event, or outcome is eligible for inclusion):
24 hours

2a1.3 Numerator Details (All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, codes with descriptors, and/or specific data collection items/responses):
Treatment is administered if within 24 hours of the positive screen for dyspnea, medical treatment plan, orders or pharmacy records show inhaled medications, steroids, diuretics, or non-medication strategies such as oxygen and energy conservation. Treatment may also include benzodiazepine or opioid if clearly prescribed for dyspnea.

2a1.4 Denominator Statement (Brief, narrative description of the target population being measured):

Patients enrolled in hospice for 7 or more days OR patients receiving palliative care who report dyspnea when dyspnea screening is done on the admission evaluation / initial encounter.

2a1.5 Target Population Category (Check all the populations for which the measure is specified and tested if any): Adult/Elderly Care

2a1.6 Denominator Time Window (The time period in which cases are eligible for inclusion):

N/A

2a1.7 Denominator Details (All information required to identify and calculate the target population/denominator such as definitions, codes with descriptors, and/or specific data collection items/responses):

The Dyspnea Treatment quality measure is intended for patients with serious illness who are enrolled in hospice care OR receive specialty palliative care in an acute hospital setting. Conditions may include, but are not limited to: cancer, heart disease, pulmonary disease, dementia and other progressive neurodegenerative diseases, stroke, HIV/AIDS, and advanced renal or hepatic failure.

For patients enrolled in hospice or palliative care, a positive screen is indicated by any dyspnea noted as other than none on a verbal screen, any number > 0 on a numeric scale or any observational or self-report of dyspnea.

[NOTE: This quality measure should be paired with the Dyspnea Screening quality measure to ensure that all patients are screened and therefore given the opportunity to report dyspnea and enter the denominator population for Dyspnea Treatment.]

2a1.8 Denominator Exclusions (Brief narrative description of exclusions from the target population):

Palliative care patients with length of stay < 1 day or hospice patients with length of stay < 7 days, patients who were not screened for dyspnea, and/or patients with a negative screening.

2a1.9 Denominator Exclusion Details (All information required to identify and calculate exclusions from the denominator such as definitions, codes with descriptors, and/or specific data collection items/responses):

Discharge date – admission date = 1 or hospice patients with discharge date – admission date = 7.

2a1.10 Stratification Details/Variables (All information required to stratify the measure results including the stratification variables, codes with descriptors, definitions, and/or specific data collection items/responses):

N/A

2a1.11 Risk Adjustment Type (Select type. Provide specifications for risk stratification in 2a1.10 and for statistical model in 2a1.13): No risk adjustment or risk stratification 2a1.12 If "Other," please describe:

2a1.13 Statistical Risk Model and Variables (Name the statistical method - e.g., logistic regression and list all the risk factor variables. Note - risk model development should be addressed in 2b4.):

N/A

2a1.14-16 Detailed Risk Model Available at Web page URL (or attachment). Include coefficients, equations, codes with descriptors, definitions, and/or specific data collection items/responses. Attach documents only if they are not available on a webpage and keep attached file to 5 MB or less. NQF strongly prefers you make documents available at a Web page URL. Please supply login/password if needed:

2a1.17-18. Type of Score: Rate/proportion

2a1.19 Interpretation of Score (Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score): better quality = higher score

2a1.20 Calculation Algorithm/Measure Logic(Describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; aggregating data; risk adjustment; etc.):

Dyspnea treatment:

a.Step 1- Identify all patients with serious, life-limiting illness who received either specialty palliative care in an acute hospital setting or hospice care

b.Step 2- Identify admission evaluation / initial encounter dates; exclude palliative care patients if length of stay is less than one day. Exclude hospice patients if length of stay is less than 7 days

c.Step 3- Identify patients who were screened for dyspnea during the admission evaluation (hospice) / initial encounter (palliative care)

d.Step 4- Identify patients who screened positive for dyspnea

e.Step 5- Identify patients who received treatment within 24 hours of screening positive for dyspnea

Quality Measure= Numerator: Patients who received treatment for dyspnea in Step 5 / Denominator: Patients in Step 4

2a1.21 – 23 Calculation Algorithm/Measure Logic Diagram URL or attachment:

2a1.24 Sampling (Survey) Methodology. If measure is based on a sample (or survey), provide instructions for obtaining the sample, conducting the survey and guidance on minimum sample size (response rate):

Hospice and palliative care: consecutive sample of equal numbers of admissions + decedents beginning with randomly selected date; minimum sample size 100.

Data collection using a structured chart abstraction tool and operational definition.

2a1.25 Data Source (Check all the sources for which the measure is specified and tested). If other, please describe:

Electronic Clinical Data

2a1.26 **Data Source/Data Collection Instrument** (*Identify the specific data source/data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.*): [Structured medical record abstraction tool, with separate collection of denominator and numerator data.](#)

2a1.27-29 **Data Source/data Collection Instrument Reference Web Page URL or Attachment:** [URL Data dictionary PEACE Project http://www.thecarolinascenter.org/default.aspx?pageid=46](#)

2a1.30-32 **Data Dictionary/Code Table Web Page URL or Attachment:** [URL Data dictionary PEACE Project http://www.thecarolinascenter.org/default.aspx?pageid=46](#)

2a1.33 **Level of Analysis** (*Check the levels of analysis for which the measure is specified and tested*): [Clinician : Group/Practice, Facility](#)

2a1.34-35 **Care Setting** (*Check all the settings for which the measure is specified and tested*): [Hospice, Hospital/Acute Care Facility 123213](#)

2a2. Reliability Testing. (*Reliability testing was conducted with appropriate method, scope, and adequate demonstration of reliability.*)

2a2.1 **Data/Sample** (*Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included*):

Two research nurse abstractors independently recorded quality measures data on a random subset of 20 seriously ill patients. Abstractors used the pre-defined operational definitions and a structured chart abstraction tool to record numerator and denominator data separately. Patients were a sub-sample of 460 seriously ill patients without specialty palliative care admitted to an acute hospital for at least 1 day to 4 inpatient services from February 2008 to November 2009. Records eligible for sampling included all seriously ill adult patients admitted to medical and surgical intensive care, medically complex patients aged 65 and older admitted to an Acute Care of the Elderly Unit, and medical oncology patients with Stage IV carcinoma.

2a2.2 **Analytic Method** (*Describe method of reliability testing & rationale*):

Inter-rater reliability between the two abstractors was assessed using kappa statistics.

2a2.3 **Testing Results** (*Reliability statistics, assessment of adequacy in the context of norms for the test conducted*):

The nurse abstractors achieved excellent inter-rater reliability for this measure: Kappa=0.89.

2b. VALIDITY. Validity, Testing, including all Threats to Validity: H M L I

2b1.1 **Describe how the measure specifications** (*measure focus, target population, and exclusions*) **are consistent with the evidence cited in support of the measure focus** (*criterion 1c*) **and identify any differences from the evidence:**

The measure focus is Dyspnea Treatment, designed to pair with Dyspnea Screening to ensure quality care processes for dyspnea. The target populations are hospice patients, and seriously ill hospitalized patients with diverse underlying diagnoses who are at high risk for palliative care clinical needs, including dyspnea.

2b2. Validity Testing. (*Validity testing was conducted with appropriate method, scope, and adequate demonstration of validity.*)

2b2.1 **Data/Sample** (*Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included*):

Hospice: The total patient sample size was 126. Fourteen hospices, located in seven different states, representing both free-standing and hospital based providers were recruited to participate. We asked each hospice to contribute data from nine patient records to the study. Nine hospices were asked to collect data on their most recent nine discharges; five hospices were asked to collect data on their most recent nine admissions.

Palliative Care: The total patient sample size was 562. Chart abstractions were completed for 102 consecutive seriously ill patients with specialty palliative care consultation, and a random sample of 460 seriously ill patients without specialty palliative care admitted to an acute care hospital for at least 1 day to four inpatient services with high proportions of seriously ill patients. Records eligible for sampling included all patients admitted to medical and surgical intensive care, medically complex patients aged 65 and older admitted to a Geriatric Evaluation Unit, and medical oncology patients with Stage IV carcinoma. Because palliative care domains become even more relevant closer to death, patients dying in hospital were over-sampled to ensure a final ratio of 1

decedent to 1 live discharge. Consistent with oversampling of decedent records, 55% of these patients died in hospital. The age of the patients ranged from 16 to 99 years, with the mean age 61. Patients were predominantly Caucasian (65%), with smaller subgroups who were African American (24%) and Hispanic / Latino (4%) The most common life-limiting diagnoses were infections (37%), cancer (34%), pulmonary (29%), and neurologic diseases (21%).

2b2.2 Analytic Method *(Describe method of validity testing and rationale; if face validity, describe systematic assessment):*

Hospice sample: Face validity was tested using formal expert panel review. The PEACE project team convened a 14-member Technical Expert Panel (TEP) of nationally recognized experts with extensive experience in the following areas: medical or nursing expertise in hospice and palliative care, methods and instrumentation, and quality improvement. Using criteria provided by the CCME study team, TEP members rated each potential quality measure from 1 (low) to 5 (high) on four criteria: importance, scientific soundness, feasibility and usability. The rating criteria mirrored those used by the National Quality Forum and the CMS Measures Management System. To identify the measures with the most favorable ratings, we created a summary measure. For each quality measure, we calculated the average TEP rating for each criterion and then tabulated an overall Average Measure Rating (AMR), weighting each the criteria equally.

Palliative Care sample: Face validity of PEACE quality measures for hospital-based specialty palliative care was addressed using stakeholder review and feedback. Investigators prepared data reports in a summary format with detailed operational definitions, and led a 1-hour discussion with nursing and physician leaders from each service group – MICU, SICU, Acute Care for the Elderly (Geriatrics), Oncology, and Palliative Care. The discussion included feedback of quality measure data, response to questions and critiques, and eliciting stakeholder feedback about the validity and actionability of this data for the care of their patients.

Stakeholders were specifically asked to comment on the accuracy of the data as a reflection of current care practices, and their highest priority area for future quality improvement.

Construct validity was tested by comparing the PEACE quality measures for patients seen by specialty interdisciplinary palliative care consultants to those not receiving specialty palliative care services.

2b2.3 Testing Results *(Statistical results, assessment of adequacy in the context of norms for the test conducted; if face validity, describe results of systematic assessment):*

Hospice sample: Completed ratings were received from 13 of the 14 TEP members. The 75th percentile cut-point translated into an AMR =3.73 (on a scale of 1 to 5 where 5 is highest). This process resulted in the identification of 23 measures with the highest TEP ratings for importance, scientific soundness, feasibility and usability. Dyspnea treatment had an overall rating of > 4 ("high importance") while screening for dyspnea was added as an antecedent measure.

Pilot testing in the hospice sample revealed that only 78% of 126 hospice patients were screened for dyspnea on the admission evaluation, and only 45% of those who screened positive were given treatment for dyspnea within 24 hours.

Palliative Care sample: Face Validity: Stakeholder discussions provided broad endorsement of face validity, with some considerations for specific patient populations. Medical oncologists endorsed the face validity of these quality measures, but favored quality measures endorsed by oncology professional organizations.

Construct Validity: Screening for dyspnea was nearly universal for all seriously ill patients, but was more consistently done by specialty palliative care providers (100% vs 95%, p=0.016). Patients with dyspnea were likely to receive some form of treatment within 24 hours, with or without the addition of specialty palliative care (96% vs 93%, p=NS).

POTENTIAL THREATS TO VALIDITY. *(All potential threats to validity were appropriately tested with adequate results.)*

2b3. Measure Exclusions. *(Exclusions were supported by the clinical evidence in 1c or appropriately tested with results demonstrating the need to specify them.)*

2b3.1 Data/Sample for analysis of exclusions *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):*

N/A

2b3.2 Analytic Method *(Describe type of analysis and rationale for examining exclusions, including exclusion related to patient preference):*

N/A

2b3.3 Results *(Provide statistical results for analysis of exclusions, e.g., frequency, variability, sensitivity analyses):*

N/A

2b4. Risk Adjustment Strategy. *(For outcome measures, adjustment for differences in case mix (severity) across measured*

entities was appropriately tested with adequate results.)

2b4.1 Data/Sample *(Description of the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):*

N/A

2b4.2 Analytic Method *(Describe methods and rationale for development and testing of risk model or risk stratification including selection of factors/variables):*

N/A

2b4.3 Testing Results *(Statistical risk model: Provide quantitative assessment of relative contribution of model risk factors; risk model performance metrics including cross-validation discrimination and calibration statistics, calibration curve and risk decile plot, and assessment of adequacy in the context of norms for risk models. Risk stratification: Provide quantitative assessment of relationship of risk factors to the outcome and differences in outcomes among the strata):*

N/A

2b4.4 If outcome or resource use measure is not risk adjusted, provide rationale and analyses to justify lack of adjustment: N/A

2b5. Identification of Meaningful Differences in Performance. *(The performance measure scores were appropriately analyzed and discriminated meaningful differences in quality.)*

2b5.1 Data/Sample *(Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):*

Hospice: The total patient sample size was 126. Fourteen hospices, located in seven different states, representing both free-standing and hospital based providers were recruited to participate. We asked each hospice to contribute data from nine patient records to the study. Nine hospices were asked to collect data on their most recent nine discharges; five hospices were asked to collect data on their most recent nine admissions.

A common structured data collection tool was developed for use by all hospices, regardless of whether the patient record was an admission or discharge record. Instructions embedded in the tool indicated the data items appropriate to each type of record. Hospices were instructed not to institute new data collection procedures for the data collection pilot. If a data item could not be found, they were told to mark the item as "unable to determine."

A data dictionary containing item-specific instructions and notes related to the patient data collection tool was distributed to each hospice center. Technical assistance was provided by email and phone to staff during the data collection period. Questions, and responses, that arose during data collection were immediately distributed to all hospices participating in the data pilot.

Palliative Care: The total patient sample size was 562. Chart abstractions were completed for 102 consecutive seriously ill patients with specialty palliative care consultation, and a random sample of 460 seriously ill patients without specialty palliative care admitted to an acute care hospital for at least 1 day to four inpatient services with high proportions of seriously ill patients from February 2008 to November 2009. Records eligible for sampling included all patients admitted to medical and surgical intensive care, medically complex patients aged 65 and older admitted to a Geriatric Evaluation Unit, and medical oncology patients with Stage IV carcinoma. Because palliative care domains become even more relevant closer to death, patients dying in hospital were over-sampled to ensure a final ratio of 1 decedent to 1 live discharge. Consistent with oversampling of decedent records, 55% of these patients died in hospital.

The age of the patients ranged from 16 to 99 years, with the mean age 61. Patients were predominantly Caucasian (65%), with smaller subgroups who were African American (24%) and Hispanic / Latino (4%) The most common life-limiting diagnoses were infections (37%), cancer (34%), pulmonary (29%), and neurologic diseases (21%).

2b5.2 Analytic Method *(Describe methods and rationale to identify statistically significant and practically/meaningfully differences in performance):*

Construct validity was tested by comparing the PEACE quality measures for patients seen by specialty interdisciplinary palliative care consultants to those not receiving specialty palliative care services. Percentage of patients with and without specialty palliative care for whom the quality measure was met was compared for difference using chi-square statistics.

2b5.3 Results *(Provide measure performance results/scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningful differences in performance):*

Hospice sample: 45% met the quality measure
 Seriously ill patients with palliative care sample: 96% met quality measure
 Seriously ill patients without palliative care: 93% (p=NS)

2b6. Comparability of Multiple Data Sources/Methods. (If specified for more than one data source, the various approaches result in comparable scores.)

2b6.1 Data/Sample (Describe the data or sample including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included):

N/A

2b6.2 Analytic Method (Describe methods and rationale for testing comparability of scores produced by the different data sources specified in the measure):

N/A

2b6.3 Testing Results (Provide statistical results, e.g., correlation statistics, comparison of rankings; assessment of adequacy in the context of norms for the test conducted):

N/A

2c. Disparities in Care: H M L I NA (If applicable, the measure specifications allow identification of disparities.)

2c.1 If measure is stratified for disparities, provide stratified results (Scores by stratified categories/cohorts):

2c.2 If disparities have been reported/identified (e.g., in 1b), but measure is not specified to detect disparities, please explain:

Disparities in dyspnea screening and treatment have not been well characterized in the hospice and palliative care population. Future research with larger sample sizes can be used to test for differential performance by race / ethnicity and by gender.

2.1-2.3 Supplemental Testing Methodology Information:

Steering Committee: Overall, was the criterion, *Scientific Acceptability of Measure Properties*, met?

(Reliability and Validity must be rated moderate or high) Yes No

Provide rationale based on specific subcriteria:

If the Committee votes No, STOP

3. USABILITY

Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (evaluation criteria)

C.1 Intended Purpose/ Use (Check all the purposes and/or uses for which the measure is intended): Public Reporting, Quality Improvement (Internal to the specific organization)

3.1 Current Use (Check all that apply; for any that are checked, provide the specific program information in the following questions): Quality Improvement (Internal to the specific organization)

3a. Usefulness for Public Reporting: H M L I

(The measure is meaningful, understandable and useful for public reporting.)

3a.1. Use in Public Reporting - disclosure of performance results to the public at large (If used in a public reporting program, provide name of program(s), locations, Web page URL(s)). If not publicly reported in a national or community program, state the reason AND plans to achieve public reporting, potential reporting programs or commitments, and timeline, e.g., within 3 years of endorsement: [For Maintenance – If not publicly reported, describe progress made toward achieving disclosure of performance results to the public at large and expected date for public reporting; provide rationale why continued endorsement should be considered.]

Use of the Hospice and Palliative Care - Dyspnea Screening and Hospice and Palliative Care - Dyspnea Treatment quality measures for public reporting requires rigorous peer review, NQF endorsement and subsequent policy change to facilitate data

access for public use.

3a.2. Provide a rationale for why the measure performance results are meaningful, understandable, and useful for public reporting. If usefulness was demonstrated (e.g., focus group, cognitive testing), describe the data, method, and results: The Hospice and Palliative Care – Dyspnea Screening and Dyspnea Treatment quality measures are meaningful and understandable for quality measurement and public reporting. The measures are simply calculated -- few exclusions, no risk adjustment, and no complex calculations -- permitting easy interpretation of results. The quality measure separates simple screening for dyspnea - asking if it is present or absent - from clinical assessment and treatment.

3.2 Use for other Accountability Functions (payment, certification, accreditation). If used in a public accountability program, provide name of program(s), locations, Web page URL(s):

3b. Usefulness for Quality Improvement: H M L I
 (The measure is meaningful, understandable and useful for quality improvement.)

3b.1. Use in QI. If used in quality improvement program, provide name of program(s), locations, Web page URL(s):
 [For Maintenance – If not used for QI, indicate the reasons and describe progress toward using performance results for improvement].

The Hospice and Palliative Care - Dyspnea Screening and Treatment quality measures are currently being used in a single site internal quality improvement project in an academic tertiary hospital.

3b.2. Provide rationale for why the measure performance results are meaningful, understandable, and useful for quality improvement. If usefulness was demonstrated (e.g., QI initiative), describe the data, method and results:
The quality measure is easily interpreted and understood by clinicians. It should be paired with the Dyspnea Screening measure to ensure that all patients with dyspnea are identified and given the opportunity to seek treatment.

Overall, to what extent was the criterion, *Usability*, met? H M L I
 Provide rationale based on specific subcriteria:

4. FEASIBILITY

Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (evaluation criteria)

4a. Data Generated as a Byproduct of Care Processes: H M L I

4a.1-2 How are the data elements needed to compute measure scores generated? (Check all that apply).
 Data used in the measure are: Abstracted from a record by someone other than person obtaining original information (e.g., chart abstraction for quality measure or registry)

4b. Electronic Sources: H M L I

4b.1 Are the data elements needed for the measure as specified available electronically (Elements that are needed to compute measure scores are in defined, computer-readable fields): ALL data elements in electronic health records (EHRs)

4b.2 If ALL data elements are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources:

4c. Susceptibility to Inaccuracies, Errors, or Unintended Consequences: H M L I

4c.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measurement identified during testing and/or operational use and strategies to prevent, minimize, or detect. If audited, provide results:
In any quality measure reliant on medical record documentation, actual care may have differed from documented care, either by failing to record care that was given or by documenting care that the patient does not experience. Potential unintended consequences could include purposeful documentation of care processes not performed; audit methodology would include patient survey to report the patient's experience of dyspnea screening and dyspnea treatment.

4d. Data Collection Strategy/Implementation: H M L I

A.2 Please check if either of the following apply (*regarding proprietary measures*):

4d.1 Describe what you have learned/modified as a result of testing and/or operational use of the measure regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues (*e.g., fees for use of proprietary measures*):

For each chart abstraction, data collection for the Hospice and Palliative Care Dyspnea Screening and Dyspnea Treatment quality measures together requires approximately 5 minutes to complete. There was no missing data for the elements needed to calculate this subset of dyspnea measures for either the Hospice or the Palliative Care samples. Record abstraction does not require collection of unique patient identifiers and thus protects confidentiality. Timing of data collection can be concurrent with admission / initial encounter care, or can be retrospective based on medical record sampling.

Costs have not been formally estimated; medical record abstraction or electronic capture of the elements of a dyspnea screen and treatment will have more modest cost compared to survey data.

Overall, to what extent was the criterion, *Feasibility*, met? H M L I

Provide rationale based on specific subcriteria:

OVERALL SUITABILITY FOR ENDORSEMENT

Does the measure meet all the NQF criteria for endorsement? Yes No

Rationale:

If the Committee votes No, STOP.

If the Committee votes Yes, the final recommendation is contingent on comparison to related and competing measures.

5. COMPARISON TO RELATED AND COMPETING MEASURES

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure before a final recommendation is made.

5.1 If there are related measures (*either same measure focus or target population*) or competing measures (*both the same measure focus and same target population*), list the NQF # and title of all related and/or competing measures:

0179 : Improvement in dyspnea
1639 : Hospice and Palliative Care -- Dyspnea Screening

5a. Harmonization

5a.1 If this measure has EITHER the same measure focus OR the same target population as [NQF-endorsed measure\(s\)](#): Are the measure specifications completely harmonized?

5a.2 If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden:

5b. Competing Measure(s)

5b.1 If this measure has both the same measure focus and the same target population as NQF-endorsed measure(s): Describe why this measure is superior to competing measures (*e.g., a more valid or efficient way to measure quality*); OR provide a rationale for the additive value of endorsing an additional measure. (*Provide analyses when possible*):

This measure is part of the NPCRC Key Palliative Measures Bundle. Refer to the NPCRC cover letter and table of bundle measures for description of the selection and harmonization of the Key Palliative Measures Bundle.

CONTACT INFORMATION

Co.1 Measure Steward (Intellectual Property Owner): University of North Carolina- Chapel Hill | 725 Martin Luther King Jr Blvd, CB 7590 | Chapel Hill | North Carolina | 27599-7590

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| Co.2 Point of Contact: Laura Hanson, MD, MPD lhanson@med.unc.edu 919-843-4096- |
| Co.3 Measure Developer if different from Measure Steward: University of North Carolina- Chapel Hill 725 Martin Luther King Jr Blvd, CB 7590 Chapel Hill North Carolina, 27599-7590 |
| Co.4 Point of Contact: Laura Hanson, MD, MPD lhanson@med.unc.edu 919-843-4096- |
| Co. 5 Submitter: Laura Hanson, MD, MPD lhanson@med.unc.edu 919-843-4096- University of North Carolina- Chapel Hill |
| Co.6 Additional organizations that sponsored/participated in measure development: The Carolinas Center for Medical Excellence, Cary, North Carolina |
| Co.7 Public Contact: Laura Hanson, MD, MPD lhanson@med.unc.edu 919-843-4096- University of North Carolina- Chapel Hill |

ADDITIONAL INFORMATION

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| <p>Workgroup/Expert Panel involved in measure development</p> <p>Ad.1 Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.</p> <p>The Carolinas Center for Medical Excellence PEACE Project Technical Expert Panel</p> <p>The PEACE project team convened a 14-member Technical Expert Panel (TEP) of nationally recognized experts with extensive experience in the following areas: medical or nursing expertise in hospice and palliative care, methods and instrumentation, and quality improvement. Using criteria provided by the CCME study team, TEP members rated each potential quality measure on four criteria: importance, scientific soundness, feasibility and usability.</p> <p>Mary Ersek, PhD, RN, Research Associate Professor, Swedish Medical Center- Pain Research Department, Seattle, WA</p> <p>Betty R. Ferrell, PhD, FAAN, Research Scientist, City of Hope National Medical Center, Duarte, CA</p> <p>Sean Morrison, MD, Mount Sinai Medical Center, NY, NY</p> <p>Richard Payne, MD, Director, Duke Institute on Care at the End of Life, Duke Divinity School, Durham, NC</p> <p>Chris Feudtner, MD, PHD, MPH, Children's Hospital of Philadelphia, Philadelphia, PA</p> <p>Karen Steinhauer, PhD, Research Health Scientists, Center for Health Services Research in Primary Care, Durham VA Medical Center and Duke University, Durham, NC</p> <p>Joan M. Teno, MD, Professor of Community Health and Medicine, Center for Gerontology and Health Care Research, Brown University, Providence, RI</p> <p>Melanie Merriman, PhD, MBA, Touchstone Consulting, North Bay Village, FL</p> <p>Sydney Dy, MD, MSc, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD</p> <p>David Casarett, MA, MD, Assistant Professor, Division of Geriatrics, Institute on Aging and Center for Bioethics, University of Pennsylvania School of Medicine and NHPCO Board of Directors</p> <p>Judi Lund-Person, Vice President, Division of Quality, National Hospice and Palliative Care Organization, Washington, DC</p> <p>Jean Kutner, MD, MSPH, Associate Professor, University of Colorado Health Sciences Center, Denver, CO</p> <p>Lin Simon, Analyst, National Hospice and Palliative Care Organization, Washington, DC</p> <p>Karen Pace, NAHC</p> |
| <p>Ad.2 If adapted, provide title of original measure, NQF # if endorsed, and measure steward. Briefly describe the reasons for adapting the original measure and any work with the original measure steward:</p> |
| <p>Measure Developer/Steward Updates and Ongoing Maintenance</p> <p>Ad.3 Year the measure was first released: 2010</p> <p>Ad.4 Month and Year of most recent revision:</p> <p>Ad.5 What is your frequency for review/update of this measure? Every 3 years or as required</p> <p>Ad.6 When is the next scheduled review/update for this measure?</p> |
| <p>Ad.7 Copyright statement/disclaimers:</p> |
| <p>Ad.8 Additional Information/Comments: This measure is part of the NPCRC Key Palliative Measures Bundle. Refer to the NPCRC cover letter and table of bundle measures for description of the selection and harmonization of the Key Palliative Measures Bundle.</p> |

Date of Submission (MM/DD/YY): [May 18, 2011](#)