



2022-2023 Technical Expert Panel Summary Report: Hospice Quality Reporting Program

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Centers for Medicare & Medicaid Services
7500 Security Boulevard
Baltimore, MD 21244-1850

Submitted by:
Abt Associates
6130 Executive Boulevard
Rockville, MD 20852

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Abt Team

Abt Associates: Isabel Alexander, Alyssa Brocker, Thomas Christian, Andrea Chung, Kyle Cobb, Haoshu Duan, Rani Duff, Olga Ehrlich, Dylan Fam, Sara Galantowicz, Kimberly Groover, Charles Harpole, Zinnia Harrison, Catherine Hersey, Jared Hite, Lynn Hoffman, Brandon Johnson, Brenda Karkos, Dana Maglic, Teresa Mota, Allison Muma, Sharon Nakhimovsky, Anwasha Nandi, Michael Plotzke, Georgia Rawhouser-Mylet, Jen Riggs, Therese Rodda, Stephanie Schneiderman, Molly Teague

OAI: Marian Essey, Elaine Gardner, Maria Orlando Edelen

RAND: Jordan Harrison

MITRE: Emily Chen, Kathy Langenberg

The Lantana Group: Robin Williams, Laura Goubeaux, Angie Goubeaux

Vanderbilt University: David Stevenson

Oregon Health & Science University: Joan Teno, Jennifer Bunker



Abt Associates | 6130 Executive Boulevard | Rockville, MD 20852

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Glossary of Acronyms

ADL	Activities of Daily Living
APU	Annual Payment Updates
CAHPS	Consumer Assessment of Healthcare Providers and Systems
CBE	Consensus-Based Entity
CHC	Continuous Home Care
CMS	Centers for Medicare & Medicaid Services
CY	Calendar Year
FY	Fiscal Year
GIP	General Inpatient Care
HCI	Hospice Care Index
HIS	Hospice Item Set
HOPE	Hospice Outcomes & Patient Evaluation
HQRP	Hospice Quality Reporting Program
HVLDL	Hospice Visits in Last Days of Life
IADL	Instrumental Activities of Daily Living
MMF	Meaningful Measures Framework
MUC	Measures Under Consideration
QM	Quality Measure
RHC	Routine Home Care
TEP	Technical Expert Panel

1. Background

The Hospice Quality Reporting Program (HQRP)

The Centers for Medicare & Medicaid Services (CMS) is committed to providing high-quality care for Medicare beneficiaries enrolled in hospice. To this end, CMS established the [Hospice Quality Reporting Program \(HQRP\)](#) authorized by [Section 1814\(i\)\(5\) of the Social Security Act](#) and requires all Medicare-certified providers to comply with specific reporting requirements. The HQRP was implemented in the Fiscal Year (FY) 2012 Hospice Wage Index final rule.¹

CMS continues to define, measure, and incentivize high-quality hospice care by prioritizing high-impact quality measures that align with the [Meaningful Measures Framework](#) (MMF) for inclusion in the HQRP. The quality measures (QMs) adopted for the HQRP promote person-centered, high quality, and safe care. **Exhibit 1** details the current HQRP measures, including the data source for each measure.

The HQRP is currently a “pay-for-reporting” program, which means that timely submission and acceptance of complete data determines compliance with HQRP requirements. The performance level is not considered when determining market basket updates referred to as Annual Payment Updates (APU). Compliance is determined by successfully fulfilling both the individual requirements of the HIS and Consumer Assessment of Healthcare Providers and Systems (CAHPS®) Hospice Survey, as well as the submission of administrative data (Medicare claims).²

Since July 2014, hospice staff must complete the HIS for all patients at admission and discharge and submit the data within 30 days of each event. The CAHPS® Hospice Survey is a national survey of primary caregivers of patients who died while under hospice care. Hospices are required to submit CAHPS® Hospice Survey data to CMS through an approved survey vendor. All hospices that submit hospice claims to Medicare automatically comply with the administrative data reporting requirement. Providers that fail to meet the submission requirements for a particular fiscal year incur a penalty to their APU. As of FY 2024 (Calendar Year [CY] 2022 data), the APU penalty increased from two percentage points to four percentage points.³

Exhibit 1: Current Quality Measures in the Hospice Quality Reporting Program⁴

Quality Measure	CBE #	Data Source	Description
Hospice and Palliative Care Composite Process Measure – Comprehensive Assessment at Admission	CBE #3235	Hospice Item Set	Percentage of patient stays for whom the hospice performed all seven care processes on admission: Beliefs/Values Addressed if desired by the patient, Treatment Preferences, Pain Screening, Pain Assessment, Dyspnea Screening, Dyspnea Treatment, and Patients Treated with an Opioid who are Given a Bowel Regimen, as applicable.

¹ See: 76 FR 47320 through 47324, <https://www.govinfo.gov/content/pkg/FR-2011-08-04/pdf/2011-19488.pdf>.

² Hospice Quality Reporting Program, <https://www.cms.gov/medicare/quality-initiatives-patient-assessment-instruments/hospice-quality-reporting>

³ Hospice Quality Reporting Program: Requirements for the Fiscal Year (FY) 2023 and Future FY Reporting Years, <https://www.cms.gov/files/document/hqrp-requirements-fy-2023-and-future-fy-reporting-yearsseptember2021.pdf>

⁴ Hospice Quality Reporting Program: Current Measures, <https://www.cms.gov/medicare/quality-initiatives-patient-assessment-instruments/hospice-quality-reporting/current-measures>

Hospice Care Index (HCI)	Not currently endorsed	Medicare Claims	HCI captures care processes occurring throughout the hospice stay, between admission and discharge. It is a single measure comprising ten indicators calculated from Medicare claims data. The indicators included in the HCI are: Continuous Home Care (CHC) or General Inpatient (GIP) Provided, Gaps in Skilled Nursing Visits, Early Live Discharges, Late Live Discharges, Burdensome Transitions (Type 1) – Live Discharges from Hospice Followed by Hospitalization and Subsequent Hospice Readmission, Burdensome Transitions (Type 2) – Live Discharges from Hospice Followed by Hospitalization with the Patient Dying in the Hospital, Per-beneficiary Medicare Spending, Skilled Nursing Care Minutes per Routine Home Care (RHC) Day, Skilled Nursing Minutes on Weekend RHC Days, and Visits Near Death.
Hospice Visits in Last Days of Life (HVLDL)	CBE #3645	Medicare Claims	The proportion of hospice patients who have received in-person visits from a Registered Nurse or Medical Social Worker (non-telephonically) on at least two out of the final three days of the patient's life
Measures calculated from the CAHPS® Hospice Survey	CBE #2651	CAHPS® Hospice Survey	Communication with Family; Getting Timely Help; Treating Patient with Respect; Emotional and Spiritual Support; Help for Pain and Symptoms; Training Family to Care for Patient; Rating of This Hospice; Willingness to Recommend This Hospice.

Hospice Outcomes & Patient Evaluation (HOPE)

CMS contracted with Abt Associates, Inc. to develop a new data collection tool for the HQRP—the Hospice Outcomes & Patient Evaluation (HOPE). HOPE aims to capture patient and family care needs as well as to better support care planning, inform quality measurement, and support providers’ quality improvement efforts. CMS intends for HOPE to also provide data for potential future payment reform, among other purposes. Additional information about HOPE is available on the HQRP HOPE webpage,⁵ previous Hospice Final Rules,⁶ and previous HQRP TEP Reports.⁷ CMS plans to develop quality measures informed by HOPE data when it is implemented. As part of the quality measure development process, CMS directed Abt to solicit stakeholder input through the HQRP Technical Expert Panel (see below).

HQRP Technical Expert Panel (TEP)

As part of CMS’ measure development process, Abt convened groups of stakeholders and experts who contributed direction and thoughtful input during measure development and maintenance. To support these efforts, the Abt team solicited volunteers for a Technical Expert Panel (TEP) who were committed to improving the quality of care given to hospice patients, and who brought relevant personal or professional experience.

⁵ Hospice Quality Reporting Program: HOPE, <https://www.cms.gov/medicare/quality-initiatives-patient-assessment-instruments/hospice-quality-reporting/hope>

⁶ CMS.gov: Hospice Regulations and Notices, <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/Hospice/Hospice-Regulations-and-Notices>

⁷ Hospice Quality Reporting Program: Provider and Stakeholder Engagement, <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Hospice-Quality-Reporting/Hospice-QRP-Provider-Engagement-Opportunities>

TEP Responsibilities

The HQRP TEP committed to do the following:

- Serve the needs of the hospice population by seeking to improve the quality of care provided to hospice patients while also improving their quality of life.
- Ensure that quality measures developed, whether assessment- or claims-based, are meaningful for the hospice beneficiaries and their families and caregivers, transparent to hospice providers, and useful to consumers.
- Be responsive to project timelines and provide timely responses to requests for input, insights, and feedback.
- Consider quality measures based on HOPE or claims data as a key focus area for their work.

Abt convened the TEP with a three-year membership term and later extended to four years. The TEP initially convened in 2019 with a three-year charter. Members were tasked with providing input hospice measure concepts, candidate measures, measure specifications, measure testing, and measure implementation.

In 2021, Abt asked TEP members to extend their agreement through the fall of 2023. This extension was intended to maintain the valuable input of the TEP members as the Abt team continued to explore process measures and increase its understanding of HOPE performance.

For 2022 and 2023, the TEP focused primarily on discussions about the importance and usability of measure concepts and potential measures, specifications of potential measures, and the potential risk adjustment of future publicly reported HOPE-based quality measures.

TEP Composition

Consistent with the [Measures Management System Blueprint](#), Abt solicited nominations for and subsequently formed a TEP to provide input into HOPE development and related quality measures. To solicit nominations from a diverse group of hospice experts including caregivers, family members, clinicians, quality improvement experts, methodologists, and other subject matter experts that was geographically diverse and represented different ownership perspectives, CMS disseminated the call for TEP members through the HQRP website and national hospice provider associations.

The final TEP consisted of eleven (11) members, selected from across a variety of hospice stakeholder groups. The TEP members represented all US regions, including rural areas. Members brought experience in hospice quality measurement, data collection, and a variety of clinical care experience in both for-profit and non-profit settings. **Exhibit 2** presents the name and profile of these TEP members. For a detailed background of each TEP member, please see the **Appendix**.

Exhibit 2: HQRP Technical Expert Panel (TEP) Members

Name	State	Urban/Rural	Size	Status	Relevant Experience
Members from hospice organizations (n = 6)					
Ashley Arnold, BSN	Minnesota	Rural	Large	For-profit	Hospice and palliative care nurse who trains and manages staff on data collection for clinical quality measures. Currently the Executive Director of Quality at St Croix Hospice.
Bonnie Lauder, RN, PMHNP, MIS, CPHQ	New York	Urban	Large	Non-profit	Nurse with healthcare informatics expertise across settings. Currently Director of Quality at Visiting Nurse Services of New York.

Name	State	Urban/Rural	Size	Status	Relevant Experience
William Matthews, RN	Florida	Urban	Large	Non-profit	Nurse who is responsible for cross-organizational collaboration to achieve quality improvement goals. Currently Quality Specialist at Tidewell Hospice, a part of Empath Health.
Jeff McNally, MD	Utah	Rural	Medium	Non-profit	Physician who focuses on standardizing workflows and identifying metrics for quality measures. Currently Hospice Medical Director for Intermountain Healthcare.
Bethany Myers, BSN, RN	Maryland	Urban	Large	Non-profit	Nurse who oversees data submission, audits data, and trains staff on quality reporting requirements. Currently Quality Assurance Nurse at Stella Maris Hospice.
Janell Solomon	Colorado	Rural	Large	Non-profit	IT professional with two decades of experience in hospice. Currently Director of Compliance at Sangre de Cristo Hospice and the EHR System Administrator for Sangre de Cristo Community Care.
Members from other organizations (n = 5)					
Connie Anderson, BSN, MBA	Washington	Urban	NA	NA	Quality measurement development expert. Former Vice President of Clinical Operations at Northwest Kidney Centers.
Teresa Craig, BBA, CPA	Florida	Urban	NA	NA	Former executive director of non-profit, for-profit, urban and rural hospices. Worked with hospice and home care programs, software, reporting tools, and technology. Currently retired but most recently was the Director of Client Strategy at NetSmart in Kansas.
Kathleen Feeney, JD	Michigan	Urban	NA	NA	Pediatric hospice caregiver with experience in quality improvement strategies to improve public service. Currently Chief Pro Tem for the Kent County Circuit Court.
Maureen Henry, PhD, JD	Utah	Urban	NA	NA	Former research scientist at the National Committee for Quality Assurance and a Senior Manager at Customer Value Partners. Currently Deputy Director of the International Longevity Center – USA and Deputy Director of the Health and Aging Policy Fellows program at Columbia University.
Sean Morrison, MD	New York	Urban	NA	NA	Palliative care medicine physician and geriatrician, as well as a clinical and health services researcher. Currently Professor and Chair for the Brookdale Department of Geriatrics and Palliative Medicine at Mount Sinai. He is also the Director of the Hertzberg Palliative Care Institute and the National Palliative Care Research Center.

Overview of TEP meetings

The TEP convened eight times between 2019 and 2023. **Exhibit 3** briefly states the topics discussed at each meeting.

Exhibit 3: TEP Meetings and Related Discussions

2019 ^a	
Fall	HOPE-based and claims-based outcomes measure concepts including pain, dyspnea, caregiver wellbeing, and patient preferences.
2020 ^b	
Spring	Claims-based measure concepts of Hospice Care Index and Weekend Visits.
Spring ^c	HOPE-based outcome measure concepts addressing pain and the implications for HOPE items.
Fall	HOPE-based outcome measure concepts assessing pain and symptom management.
2021 ^d	
Summer	HOPE-based process measure concepts addressing pain and symptom management.
Fall	HOPE-based process measure concepts addressing pain and symptom management and measure concepts using other data sources.
2022	
Summer	Risk adjustment for HOPE-based quality measures.
2023	
Spring	HOPE-based quality measure specifications, exclusions, and future measure development priorities.

^a Refer to the [November 2019 Technical Expert Panel: Hospice Quality Report Program Summary Report](#) for additional details.
^b Refer to the [2020 Technical Expert Panels: Hospice Quality Reporting Program Summary Report](#) for additional details.
^c This meeting was a workgroup with subset of TEP members.
^d Refer to the [2021 Technical Expert Panel: Hospice Quality Reporting Program Summary Report](#) for additional details.

Prior TEP recommendations

During the 2019, 2020, and 2021 TEP meetings, the TEP identified timely reassessment of both pain and non-pain symptoms, timely pain symptom management, timely reduction of non-pain symptoms, patient preferences and goal setting, education on symptoms, and medication management to be priorities for future HOPE-based quality measure development. The TEP supported the use of hybrid measures (measures developed from more than one data source), contingent on the specifications of a given hybrid measure, and specifically endorsed hybrid measure concepts addressing patients' end-of-life preferences. They also recommended that CMS take care not to overwhelm consumers when presenting publicly reported quality data.

From these priorities, Abt, in partnership with CMS, developed two candidate pain management measure concepts (the *Timely Reassessment of Pain Impact* process measure and the *Timely Reduction of Pain Symptom Impact* outcome measure) and two candidate non-pain symptom management measures (the *Timely Reassessment of Non-Pain Symptom Impact* process measure and the *Timely Reduction of Non-Pain Symptom Impact* outcome measure).

Summer 2022 and Spring 2023 TEP Webinars

Abt convened two TEP meetings in 2022 and 2023 to solicit input on potential risk adjustment for HOPE-based outcome measures, specifications for HOPE-based process measures, and future quality measure development. The remainder of this report focuses on the details of the 2022 and 2023 TEP meetings.

2022

Abt convened the 2022 TEP on May 5th, 2022, with eight TEP members participating. During this TEP meeting, Abt provided an overview of risk adjustment, and sought feedback on the potential risk adjustment factors to consider for HOPE-based outcome measures. The potential risk adjustment factors cover several areas such as:

- Demographic information and socioeconomic factors

- Treatments (such as IV therapies)
- Risks (such as the risk of hospitalization)
- Living situation
- Clinical symptoms
- Diagnoses
- Functional Status – Activities of Daily Living (ADLs)/Instrumental Activities of Daily Living (IADLs)

2023

On March 8th, 2023, Abt conducted another TEP meeting with nine TEP members participating. During this meeting, Abt solicited input from the TEP on specifications for two HOPE-based process measures, *Timely Reassessment of Pain Impact* and *Timely Reassessment of Non-Pain Impact* based on information such as:

- Desired tolerance/Patient preference
- Neuropathic pain
- Actively dying
- Patient refusals and special circumstances
- Patient age

Abt also asked the TEP to rate the face validity of the two HOPE-based process quality measures. Finally, the TEP provided feedback on future HOPE quality measure concepts and voted on priorities for future quality measure development.

2. Risk Adjustment for Outcome Measures

Risk adjustment is a statistical approach that controls for confounding factors responsible for differences in quality measure outcomes. The goal of risk adjustment is to ensure that quality measure outcomes are unaffected by confounding factors. In this way, risk adjustment allows for an accurate comparison of outcome measure performance across providers by accounting for differences in outcomes due to factors outside the provider's control. Risk adjustment must be clinically and conceptually plausible, and analysis must reveal a statistically significant influence on the outcome.

When quality measures are used for public reporting or Medicare payment, overestimates or underestimates of care quality can affect consumers' choices and provider reimbursement. As a result, providers might be less likely to take on patients with high care management needs to avoid receiving poorer quality scores. Risk adjustment sets realistic expectations for patients with certain conditions, so that outcome measurement for those patients is comparable to patients without those conditions. Therefore, CMS risk adjusts publicly reported outcome measures to ensure performance scores are accurate reflections of care quality. Risk adjustment factors must be carefully selected to ensure that quality measure scores are representative of provider quality and to avoid exacerbating underlying inequities.⁸

Confounding Factors

External (confounding) factors, such as patients' age, socioeconomic status, diagnoses, risks, living situations, and functional status, are beyond providers' control, and may differ between states or providers. If not accounted for, external factors can distort comparisons of providers' quality outcomes.

The Abt team presented the TEP with a list of risk adjustors for HOPE-based outcome measures and solicited feedback to inform measure development efforts. **Exhibit 4** below lists these potential risk factors.

Exhibit 4: Potential risk adjustment factors

Category	Potential Risk Adjustors
Demographic	<ul style="list-style-type: none"> • Age • Gender • Payment source • Admission source • Post-acute facility admission source
Treatments	<ul style="list-style-type: none"> • IV Therapies
Risks	<ul style="list-style-type: none"> • Risk of hospitalization
Living Situation	<ul style="list-style-type: none"> • Availability of assistance • Living arrangements
Clinical Symptoms	<ul style="list-style-type: none"> • Pain • Pressure Ulcers • Stasis Ulcers • Surgical wounds • Dyspnea • Urinary status • Bowel incontinence • Depression screening • Frequency of disruptive behaviors

⁸ Vyas DA, Eisenstein LG, Jones DS. Hidden in Plain Sight - Reconsidering the Use of Race Correction in Clinical Algorithms. *N Engl J Med*. 2020 Aug 27;383(9):874-882. doi: 10.1056/NEJMms2004740. Epub 2020 Jun 17. PMID: 32853499.

Category	Potential Risk Adjustors
Diagnoses	<ul style="list-style-type: none"> • Diagnoses codes
Functional Status	<ul style="list-style-type: none"> • Bathing • Toilet transferring • Toilet hygiene • Transferring • Ambulation • Feeding or eating
Management of Care Needs	<ul style="list-style-type: none"> • Oral medication management • Injectable medication management • Supervision and safety assistance

Discussion

Overall, the TEP’s discussion on risk adjustment focused on high-level concepts. The TEP broadly agreed that risk adjustment is very important because it accounts for external factors outside hospices’ control and more accurately reflects the quality of care provided. The Abt team provided several categories of risk adjustors for outcome measures. The TEP discussed and ranked those options by relative importance, should the number of risk adjustors be limited. **Exhibit 5** summarizes the TEP’s recommendations, which are also discussed in more detail below.

Exhibit 5. Risk Adjustor Recommendations by Importance

Must include	Important	Caution Advised	Do not include
<ul style="list-style-type: none"> • Age • Diagnoses 	<ul style="list-style-type: none"> • Living situations • Site of service • Length of stay 	<ul style="list-style-type: none"> • Payment source • Treatment • Risk of hospitalization 	<ul style="list-style-type: none"> • Gender⁹ • Clinical symptoms • Functional status • Management of care needs

TEP Recommendations

Recommended

Age and Diagnoses: The TEP broadly agreed that age and diagnosis are the most important risk factors to adjust for. Some diseases are more difficult to manage than others, and patient condition tends to decline with age irrespective of provider activity. Therefore, the TEP recommended that CMS adjust for these factors to ensure that reported care quality is not adversely affected by common external factors. However, the TEP also suggested that, if the purpose of risk adjustment is to help patients understand how well other patients with certain diseases or of certain age groups are treated, CMS should be cautious about risk adjustment for these two factors. Risk adjusting by age and diagnosis would obscure the differences between these patient categories. The TEP did not suggest stratified reporting by age or diagnosis.

Living Situations: Several TEP members mentioned that staffing issues which are outside the hospice’s control, such as labor shortages, could affect care quality. Therefore, the availability of assistance should be used in risk adjustment for public reporting. Similarly, when hospice care happens at home, family members usually provide important care and support as well. Therefore, the care quality might differ

⁹ Note that the forthcoming HOPE (item) will collect information based on the patients’ *gender* as opposed to biological sex.

significantly when living alone compared to living with others. Due to these considerations, the TEP ranked living situation risk adjusters as important to include.

Site of Service: In addition to the risk adjustment factors Abt presented, some TEP members suggested that site of service should be taken into consideration. Care is delivered very differently across settings, and patients and/or caregivers tend to provide higher hospice satisfaction ratings for hospices in home settings than for those in facilities.¹⁰ Therefore, site of service can be an important risk adjuster when trying to compare hospices.

Length of Stay: Additionally, the TEP generally agreed the length of stay can impact care quality and should be accounted for. The care delivered 4 days after the start of care and 6 months after the start of care are significantly different, and CMS should consider including length of stay in risk adjustment models. Alternatively, the TEP suggested that CMS could stratify public reporting by length of stay, with increments of the first 7 days, 14 days, 30 days, and monthly increments after 30 days.

Caution Advised

Payment Source, Treatment, and Risk of Hospitalization: One TEP member advised CMS should be careful or use caution about using payment sources, IV therapy, and risk of hospitalization as risk adjusters. This TEP member suggested that these factors might be gamed to distort hospices' apparent care quality.

Not Recommended

Gender, Clinical Symptoms, Functional Status, and Management of Care Needs: The TEP overwhelmingly agreed that gender should not be a risk adjuster but did not discuss the rationale for this decision. Several TEP members agreed that clinical symptoms should not be used for risk adjustment, as they are highly correlated with patients' diagnoses. The TEP also agreed not to recommend patients' functional status, such as ADL and IADL, be used for risk adjustment in hospice care. This is because hospice patients, who have less than 6 months' life expectancy, typically experience declining functional status during their stay. As a result, the goal of hospice care is for comfort rather than improvement in functional status before death. One TEP member felt strongly about not adjusting for patients' management of care needs (such as medication management or supervision and safety assistance), as the public and CMS should hold hospices accountable for planning around oral medication, injectable medication management, and supervision and safety assistance.

Purposes of Public Reporting

The TEP felt that the external factors that warrant risk adjustment depend on the purpose of the public reporting. The TEP suggested using different sets of risk adjustment factors for public reporting purposes than for hospice quality improvement work. Internal hospice quality improvement efforts would benefit from more detailed risk adjustment that helps identify areas for improvement. This detailed risk adjustment would include factors such as treatments, risk of hospitalization, payment source, or admission source.

Patients and families would benefit from more straightforward risk adjustment that helps them select a hospice, including factors such as diagnosis. For publicly reported data used to select a hospice, the TEP suggested using demographic factors (including age but excluding gender), socioeconomic factors, living situation, and diagnoses.

¹⁰ Regier, N.G., Cotter, V.T., Hansen, B.R., Taylor, J.L. and Wright, R.J. (2021), Place of Death for Persons With and Without Cognitive Impairment in the United States. *J Am Geriatr Soc*, 69: 924-931. <https://doi.org/10.1111/jgs.16979>

3. HOPE-Based Process Measures

Symptom management is a central tenet of hospice care. The HOPE-based process measures under development focus on timely reassessment of pain and non-pain impact, based on the percentage of patients assessed with moderate or severe symptom impact who received a follow-up reassessment within two days. The numerator and denominator definitions for *Timely Reassessment of Pain Impact* and *Timely Reassessment of Non-Pain Impact* are shown in the table below.

Exhibit 6. Definition of HOPE-based process measures

	Timely Reassessment of Pain Impact	Timely Reassessment of Non-Pain Impact
Numerator	Assessments where pain impact is reassessed within 2 days of the triggering assessment date	Assessments where non-pain ¹¹ symptoms impact is reassessed within 2 days of the triggering assessment date.
Denominator	Total assessments where pain impact is moderate or severe at admission.	Total assessments where non-pain impact is moderate or severe at admission.

Process Measure Face Validity

Face validity is the extent to which a measure is subjectively viewed as covering the concept it aims to measure. In other words, a high face validity means a measure “looks like” it will measure what it is supposed to measure.¹² Abt asked the TEP members to rate the face validity of both process measures, *Timely Reassessment of Pain Impact* and *Timely Reassessment of Non-Pain Impact*, using a scale from 1 (the lowest rating) to 9 (the highest rating).

Discussion

All TEP members rated both *Timely Reassessment of Pain Impact* and *Timely Reassessment of Non-Pain Impact* measures as having **high face validity** (above 7). The TEP agreed that these two process measures offer multiple benefits to both hospice providers and consumers. The measures can help hospices to assess whether they helped reduce/treat patients’ pain and non-pain symptoms. The measures can also help consumers better understand whether the hospice is assessing and treating symptoms that matter to patients and caregivers, enabling more informed decisions when selecting a hospice provider.

Process Measure Exclusions

To ensure accurate comparison for the process measures across hospice providers, the Abt team presented the TEP with a list of items for exclusion criteria to consider. Specifically, Abt sought feedback from the TEP on whether CMS should exclude patients from process quality measure calculations based on their desired tolerance levels for symptoms, preferences for symptom management, presence of neuropathic pain, and whether they are actively dying at admission.

Discussion

Patient Desired Tolerance Level for Symptoms aims to identify the patient’s desired tolerance level for symptoms (i.e., , pain, shortness of breath, anxiety, nausea, vomiting, diarrhea, constipation, and agitation). HOPE Beta Test findings suggested the vast majority of patients’ tolerance was for “None” or

¹¹ Non-Pain Symptoms include shortness of breath, anxiety, nausea, vomiting, diarrhea, constipation, and agitation.

¹² Gravetter, Frederick J.; Forzano, Lori-Ann B. (2012). *Research Methods for the Behavioral Sciences* (4th ed.). Belmont, Calif.: Wadsworth. p. 78. [ISBN 978-1-111-34225-8](https://doi.org/10.1111/9781113422588).

“Slight” symptom levels. In the Beta Test, patients with moderate or severe pain impact predominantly had lower desired tolerance of pain.

Abt asked the TEP whether CMS should exclude patients who expressed a desire for moderate or severe symptom levels when calculating the *Timely Reassessment of Pain Impact* and the *Timely Reassessment of Non-Pain Symptom Impact*. Abt also asked the TEP whether the exclusion should differ by pain and non-pain symptoms.

The TEP overwhelmingly agreed that symptom reassessment is important, and that process measures should include patients with moderate or severe symptom impact regardless of their desired tolerance level for symptoms. Several TEP members also noted that patients’ desired tolerance levels are fluid and may change during their stay in the hospice. Additionally, the TEP agreed that both pain and non-pain symptoms should have the same measurement exclusion criteria.

Patient Preferences for Symptom Management determines if the patient prioritizes reduction of their symptoms (including pain, shortness of breath, anxiety, nausea, vomiting, diarrhea, constipation, and agitation) even with potential side-effects or inconveniences from the treatments. HOPE Beta Test results suggested that the majority of patients preferred symptom management for any of the symptoms at admission. Furthermore, most Beta Test patients who preferred pain management at admission still wanted pain management at symptom reassessment.

Abt asked the TEP whether CMS should exclude patients with no preference for symptom management when calculating process measures and whether the exclusion should differ by pain and non-pain symptoms. The TEP believes that patients with no preference for symptom management should be included in the process measure calculations, and the exclusion criteria should be the same for pain and non-pain symptoms. Some TEP members pointed out that hospice patients’ preferences for pain and non-pain symptom management may change between admission and reassessment, and that hospice providers should treat the patient based on their most recently expressed preference. However, the TEP also noted that hospices should not be penalized for incomplete data if patients have no preference for symptom management.

Neuropathic Pain identifies whether the patient has pain that is neuropathic in nature, such as, burning, tingling, pins and needles, and/or hypersensitivity to touch. Research suggests that 40% of hospice patients may experience neuropathic pain, and patients who experience neuropathic pain have more severe and more distressing pain symptoms.¹³

Abt asked the TEP whether CMS should exclude patients with neuropathic pain from the process measure calculations. Abt also asked the TEP if it would make sense to include patients with neuropathic pain from in process measures but exclude these patients from outcome measures.

The TEP agreed that patients with neuropathic pain should be included for the process measure and the hospice should have follow-up reassessment visits with these patients. Although neuropathic pain is a chronic condition and it may be unrealistic for hospices to resolve or reduce it within two days, it is still clinically important to identify patients with neuropathic pain, so that therapy trials can be applied accordingly. By contrast, the TEP noted that related outcome measures should exclude patients with neuropathic pain.

¹³ Tofthagen, C., Visovsky, C., Dominic, S., & McMillan, S. (2019). Neuropathic symptoms, physical and emotional well-being, and quality of life at the end of life. *Supportive Care in Cancer*, 27(9), 3357-3364. doi:10.1007/s00520-018-4627-x

Actively Dying (Death is Imminent) determines if the patient appears to have a life expectancy of 3 days or less based on clinicians' assessment. During the HOPE Beta Test, the prevalence of patients identified as "actively dying" at admission was very low.

The TEP discussed whether to exclude patients identified as actively dying at admission, since they are less likely to be alive for a follow-up symptom reassessment. The TEP broadly agreed that there should not be an exclusion for patients deemed to be actively dying. Multiple TEP members noted that if the patient is actively dying and has moderate or severe symptom impact, there should be an attempt at reassessment.

Other Considerations for Measurement Exclusions: The TEP also provided feedback on other exclusion criteria for the process measure denominators. The TEP discussed and agreed that process measures should include patients of all ages. Several TEP members noted that all patients experience pain and non-pain symptoms, and therefore the measures should apply to adults and children alike.

They agreed that process measures should exclude patients for whom the hospice is unable to reassess symptom impacts as scheduled for one of the following reasons:

- Hospice discharged the patient from hospice (including death and live discharge);
- Patient or caregiver refused the visit;
- Patient was inaccessible:
 - Patient was in the emergency department or unexpectedly hospitalized (not for Hospice General Inpatient Care [GIP]);
 - Patient was travelling outside hospice service area; or
- Hospice was unable to contact the patient/caregiver.

Nonetheless, the TEP felt hospices should be penalized if reassessment is missing or delayed due to hospice staffing or scheduling issues.

4. Future Quality Measure Development

Abt also sought the TEP's input regarding the future development of HOPE-based quality measures. Abt presented several potential future process measure concepts, including:

- Education for Medication Management
- Wound Management Addressed in Plan of Care
- Transfer of Health Information to Subsequent Provider
- Transfer of Health Information to Patient/Family Caregiver

Abt also requested TEP input on developing future HOPE-based outcome measures, such as:

- Patient Preferences Followed throughout Hospice Stay
- Hospitalization of Persons with Do-Not-Hospitalize Order

Discussion

The TEP discussed and voted on whether CMS should continue to develop each of the potential measure concepts. The results of each of these discussions are summarized below.

Process Measure Concepts

Education for Medication Management: The TEP broadly agreed that CMS should develop this measure, as there is a significant need for training in medication management for patients and their caregivers. One TEP member said that, despite the potential impact of this measure, difficulties arise if patients have multiple caregivers and asking hospices to train all caregivers in a facility setting creates additional burden for the hospice. Moreover, hospices cannot control facility hiring and training decisions. They suggested that the Education for Medication Management measure might be more useful for home settings than facility settings. Another TEP member responded that it is important to word the question to be “during today’s visit.”

Wound Management Addressed in Plan of Care: The TEP had mixed opinions about whether CMS should further develop this measure. The TEP generally agreed that this measure is important, as having a record of wound management addressed in the plan of care can hold the staff accountable for treating the wounds. However, Some TEP members felt that wound management should be measured with outcome measures rather than process measures. Another TEP member expressed concern that patients’ conditions may deteriorate over time, creating challenges for the hospice. The TEP also felt that the measure specifications should be carefully defined. One TEP member noted that the time frame of this measure is important, and encouraged recording the process of getting care in place once a wound is identified.

Transfer of Health Information to Subsequent Provider and Transfer of Health Information to Patient/Family Caregiver: The TEP had generally negative opinions about developing this measure. TEP members expected that most agencies would check “Yes” for these two items since this is standard hospice practice, and therefore these two measures are likely to top out. The Transfer of Health Information might also be difficult to verify, relying on staff and recipient reports. Additionally, there is already an expectation that agencies will transfer health information to subsequent providers or family members for internal process improvement.

Outcome Measure Concepts

Patient Preferences Followed Throughout Hospice Stay and Hospitalization of Persons with Do-Not-Hospitalize Order: Overwhelmingly, the TEP voted against developing these two measures. Multiple TEP members described situations in which patients who had preferred not to be hospitalized changed their minds when a crisis occurred. Patients’ preferences and unexpected crises are usually out of the hospice’s control. Although it is still important for hospices to ask patients about their preferences as part

of patient-centered care, the TEP did not believe these two items would be practical measures of a hospice's care quality.

Measure Development Priorities

Based on the discussions summarized above, the TEP took a poll to identify the 3 highest priorities for future HOPE quality measure development. Results were as follows:

1. Education for Medication Management
2. Wound Management Addressed in Plan of Care
3. Hospitalization of Persons with Do-Not-Hospitalize Order

5. Conclusions

Key Recommendations

Outcome Measures

In developing future HOPE-based outcome measures, CMS should consider applying several risk adjustment factors to ensure comparisons between hospices accurately reflect relative performance. The TEP broadly agreed that age and diagnosis were the most important risk factors to adjust for, as some diseases are more difficult to manage than others, and patients' conditions generally decline with age. The TEP also supported risk adjusting by living situation, as availability of assistance and whether a patient lives alone can impact care quality and are outside of the hospice's control. TEP members supported using site of service as a risk adjuster, as care is often delivered differently in different hospice settings. They also suggested either risk adjusting for length of hospice stay, or stratifying by the first 7 days, 14 days, 30 days, and monthly increments after 30 days. The care delivered during short-stay and long-stay hospice elections vary greatly, and the TEP encouraged CMS to reflect this fact in HOPE quality measures. Additionally, the TEP suggested using clinical symptoms as stratifiers rather than risk adjustment factors, as they are highly correlated with diagnoses.

The TEP did not believe that functional status would be a useful risk adjustment factor for hospice performance, as hospice patients' functional status generally declines during the normal course of hospice.

Process Measures

The TEP supported the use of the *Timely Reassessment of Pain Impact* and *Timely Reassessment of Non-Pain Symptom Impact* process measures and recommended that CMS should continue developing these HOPE-based process measures.

The TEP supported several exclusions for the HOPE-based process measures. TEP members felt that hospices should not be penalized if a patient died between admission and reassessment, thus preventing the hospice from completing a symptom reassessment. The TEP also recommended process measure exclusions for situations in which the hospice was unable to visit at symptom reassessment because the patient or caregiver refused the visit, the patient was in the emergency department or hospital, the patient was travelling outside the hospice service area, or the hospice was unable to contact the patient or caregiver. Each of these exclusions was deemed to be outside of the hospice's control, and the TEP did not believe hospices should be penalized for these circumstances.

Future QM Development

Of the several measure concepts proposed for future development, the TEP supported CMS further developing the *Education for Medication Management* process concept, somewhat supported CMS developing the *Wound Management* process concept, and ranked the *Hospitalization of Patients with a Do-Not-Hospitalize Order* outcome concept as the third highest priority but did not support its development. The TEP believed that there is a significant need for training in medication management for patients and their caregivers. The TEP also agreed that having a record of wound management addressed in the plan of care will help to hold the staff accountable for treating wounds. The TEP had concerns about whether the *Hospitalization of Patients with a Do-Not-Hospitalize Order* measure concept would be a practical measure of hospice care quality but did consider it important to verify that hospices discuss care preferences with patients as part of person-centered care planning.

Future Directions for Analysis and Research

CMS intends to develop additional HOPE-based quality measures and will consider the TEP's suggested priorities of medication management and wound management as they evaluate potential future quality measures.

CMS will also continue exploring risk adjustment and stratification for the HOPE-based measures. Risk adjustment factors will be especially important as CMS works to develop HOPE-based outcome measures in the future.

Next Steps

CMS submitted the two HOPE-based process measures, *Timely Reassessment of Pain Impact* and *Timely Reassessment of Non-Pain Symptom Impact* to the consensus-based entity (CBE) as part of the 2023 Measures Under Consideration (MUC). Based on the results of CBE review, CMS may finalize these measures in future rulemaking for the HQRP. For more information, see the [Quality Measure Development page](#) on the HQRP website.

Appendix: TEP Bios

Janell Solomon is the Director of Compliance at Sangre de Cristo Hospice, a large non-profit facility in rural Colorado. In her current role, Ms. Solomon performs audits of quality measurement documentation and trains staff on how to improve documentation of responses for HIS elements. She ensures the integration of other necessary elements such as payroll, pharmacy, and clinical supply needs. Ms. Solomon was a participant in the Centers for Medicare Services (CMS) HEART Pilot A Test, while also leading numerous beta tests in coordination with Sangre de Cristo's electronic health record (EHR) vendor to improve the efficiency and capability of new software. She currently resides in Pueblo, CO.

Bethany Myers is a Quality Assurance Nurse at Stella Maris Hospice, a large facility in Timonium, Maryland. In her current role as a practicing clinician, Ms. Myers transmits completed HIS to CMS for hospice homecare and inpatient units, while reviewing CASPER report for errors or warnings, compiles quality assurance data, audits admission charts, and educates staff about reporting and patient care issues. She also monitors hospice quality data and synthesizes results for other nurses. Ms. Myers received her BSN from Messiah College and currently lives in Timonium, MD.

Sean Morrison is a practicing palliative medicine physician and geriatrician, clinical and health services researcher, as well as the Chair of the Brookdale Department of Geriatrics and Palliative Medicine at the Icahn School of Medicine at Mount Sinai. Dr. Morrison has published over 200 research articles, most of which focus on improving the management of pain in older adults and on developing and evaluating models of palliative care delivery in hospitals and the community. Dr. Morrison received his BA from Brown University and his MD from the University of Chicago. He currently lives in New York, NY.

Jeff McNally is the Senior Medical Director of Homecare/Hospice/Palliative Care/Post-Acute Care at Intermountain Healthcare, a Utah-based, not-for-profit system of hospitals and other health service entities. After twenty-three years of providing emergency medicine care, Dr. McNally transitioned to hospice care. Currently, he works on standardizing workflows and determining metrics to accurately measure the quality and experience of care. Dr. McNally received his MD from the University of Washington and his BA from Stanford University. He currently lives in Salt Lake City, UT.

William Matthews is a Quality Specialist Nurse for Empath Health, a large non-profit hospice and home care-based health care organization in South Florida. He is regularly involved in the process of abstracting, submitting, and analyzing the hospice quality data that is currently required by the Hospice Quality Reporting Program (HQRP), and is familiar with providing the bedside care that quality measures assess. He also collaborates with clinical management, the education department, and the IT department to ensure a comprehensive approach to achieving quality improvement goals. Mr. Matthews received his RN from Manatee Community College and his BA from the University of South Florida. He currently lives in Sarasota, FL.

Bonnie Lauder is the Director of Quality at VNS Health's Hospice and Palliative Program and a registered nurse. Ms. Lauder has twenty-five years of experience in the field of healthcare informatics and quality, with a focus on interpretation and implementation of regulatory standards and measures. Since 2005, she has successfully designed and implemented core clinical and management delivery systems across hospital, home care, and hospice continuums using the Institute for Healthcare Improvement's (IHI) Collaborative Model for Achieving Breakthrough Improvement. Ms. Lauder is also a published author on topics related to evidence-based care implemented at the interdisciplinary care team level. She received her BSN from the State University of New York at Downstate and her Master's in Information Systems from Pace University. Ms. Lauder currently lives in New York, NY.

Maureen Henry is the Deputy Director of the International Longevity Center – USA and Deputy Director of the Health and Aging Policy Fellows program at Columbia University. Prior to this position, she served as the Study Director and Lead Writer for the National Academy of Medicine’s Global Roadmap for Healthy Longevity. From 2014-2019, in her role as Research Scientist at the National Committee for Quality Assurance (NCQA), Dr. Henry was Principal Investigator on a grant using learning collaborative comprising community-based palliative care organizations to use quality improvement techniques to develop and test measures based on patient goals in serious illness care. She was the qualitative research lead on a parallel project creating goal-based measures of quality in community-based care. Dr. Henry was also the task lead developing HEDIS® care coordination measures for the Medicare Advantage Program. Earlier, Dr. Henry served a term as the President of the Utah Hospice and Palliative Care Organization and was the Executive Director of the Utah Commission on Aging and Utah’s Aging and Disability Resource Center (ADRC). Ms. Henry received her PhD from the University of Utah, her JD from The University of California at Berkeley, and her BA from the University of Delaware.

Kathleen Feeney is the Chief Judge Pro Tem of the Kent County Circuit Court in Grand Rapids, Michigan, where she routinely employs quality improvement strategies in evaluating and improving public service. Ms. Feeney serves on numerous statewide workgroups to improve child protection proceedings and the provision of care to medically fragile children. Following the death of her one-year-old daughter in 2000, Ms. Feeney and her husband joined the Family Center Care Advisory Council at the Helen DeVos Children’s Hospital to support clinicians in making hospice care more patient-centered. Ms. Feeney received her JD from The University of Illinois and currently lives in Grand Rapids, Michigan.

Teresa Craig is the former Director of Client Strategy at NetSmart, an electronic health record (EHR) vendor for post-acute care communities. Ms. Craig retired from this position in 2020, after thirty years of experience working with hospice and home care programs, software, and technology. She has served as Executive Director, CIO, CFO, and Vice President for both non-profit and for-profit hospice providers across multiple states and in both urban and rural locations. She served on the Quality Council for these hospice providers, while overseeing the development of home care software and reporting tools. She was the CEO of Suncoast Solutions, the first software specifically designed for hospice programs. Ms. Craig is a CPA and received her BBA from Wichita State University. She lives in Dunedin, Florida

Ashley Arnold is the Executive Director of Quality at St. Croix Hospice, which is a large, for-profit facility located in Oakdale, Minnesota. As a certified hospice and palliative care nurse, Ms. Arnold has a combination of clinical and managerial experience. At St. Croix Hospice, she has delivered hospice care directly, while also training and managing field staff on data collection for quality measurement. Ms. Arnold received her BSN from Saint Catherine University and currently lives in Saint Michael, Minnesota.

Connie Anderson is the former Vice President of Clinical Operations at Northwest Kidney Centers, where she spent forty-four years working extensively in quality measure development. Ms. Anderson is currently the Co-Chair of the End Stage Renal Disease Standing Committee for quality measures and has been actively involved with the National Quality Forum (NQF) for fifteen years. She is also an international resource for those interested in home hemodialysis and is known for her humane care of renal disease patients. Ms. Anderson received her BSN from the University of Washington and currently lives in Kirkland, WA.