March 2018

Technical Expert Panel Report: HQRP HEART Development

Deliverables 10, 11, and 14

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CMS Contract No. HHSM-500-2013-13015I

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ACKNOWLEDGMENTS

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SECTION 1
OVERVIEW OF HEART DEVELOPMENT

1.1   Goals of HEART

In 2015, the Centers for Medicare & Medicaid Services (CMS) began developing the Hospice Evaluation & Assessment Reporting Tool (HEART), a comprehensive patient assessment tool for use in hospice. An expansion of the items currently included in the Hospice Item Set (HIS), HEART is intended to serve three central purposes (see **Figure 1**). HEART will gather patient-level information throughout the patient's hospice stay that could be used to assess quality of hospice care in harmony with the clinical information routinely gathered during hospice care. Thus, HEART will provide hospices with information to help them address patient and family needs and ensure the delivery of high-quality care. In addition, HEART will gather information that may be used to calculate case-mix and inform the development of future payment methodologies or quality measures.

Figure 1.
Central Purposes of HEART
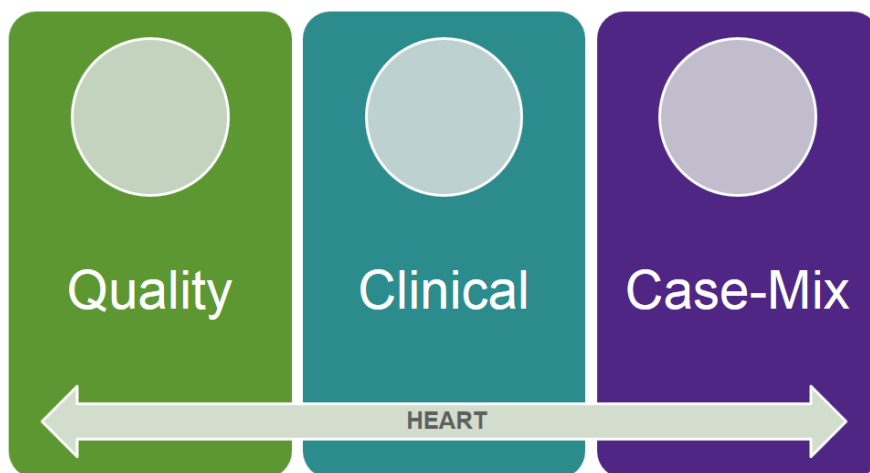
Quality

Although HEART is intended to be multifunctional, its principal purpose is to collect data that will be useful for future quality measure development. As an expansion of the HIS, HEART will include HIS items and can therefore be used to calculate the quality measures currently implemented in the Hospice Quality Reporting Program (HQRP). Unlike the HIS, HEART will gather information about the quality of care delivered to patients throughout their hospice stay; thus, HEART could be used in the future to create additional meaningful process and outcome quality measures from the items.

Clinical

HEART will gather patient-level information in a way that aligns with clinical workflow and minimizes provider burden. In addition, while gathering standardized patient-level data

critical to CMS's goals, HEART will provide the flexibility that clinicians need to provide patient-centered care. To meet this goal, and to ensure HEART is useful to patients, providers, and other stakeholders, HEART will include items that are critical for high-quality patient care, including elements that help hospice providers work with patients and families to establish goals of care consistent with the individual's values. HEART will not replace any of the assessments required by the Medicare Hospice Conditions of Participation of 2008 (CoPs) (42 Code of Federal Regulations [CFR] 418.54). These existing requirements give hospices discretion and the ability to use best clinical judgment as they implement the key elements of patient assessments.

Case-Mix

HEART will gather information about patient characteristics that increase complexity of care in ways that increase resource use for hospice providers. This information could help CMS identify patients who require the highest intensity of hospice services, and could allow CMS to explore future payment system refinements.

Overall, HEART will capture quality, clinical, and case-mix information throughout the patient stay. To achieve these goals, HEART assessments may need to occur at varying times during a patient's hospice episode of care. The specifics of which items will be collected at different points during a patient's stay in hospice will be determined through expert input and testing.

1.2 Context

1.2.1 Unique Features of Hospice Care

CMS and RTI International are committed to developing HEART such that it reflects the unique aspects of the hospice model of care.

Preferences of the Patient and Family as a Central Focus

In the hospice setting, the goals of care are explicitly tied to patient and family preferences. Patients become eligible for and may elect hospice when they have a life expectancy of 6 months or less and have decided to forego continued attempts at curing their terminal condition. Their goals tend to be to maximize quality of life, wellbeing, and symptom control. Though other care providers increasingly incorporate patient engagement in goal setting, hospice is unique in that the unit of care in hospice is defined as the patient and their family or other caregivers, and goals of care are defined by patient and family preferences. Patient and family preferences can vary widely, and often evolve over time. Notably, these preferences can and often do shift as death approaches. To provide high-quality care, hospices must be responsive to changes in preferences.

Patient and Family as the Unit of Care

Whereas other health care settings focus on the patient, in the hospice model, the unit of care is defined as the patient *and* their family. Additionally, the "family" is defined by the patient and can include a range of individuals, from spouses to non-relatives such as neighbors.

Variety of Care Settings

Hospice care is most commonly delivered in the home. Home is defined as wherever the hospice patient resides. This includes various settings with varying levels of support and resources in place, such as homes with many caregivers, homes with no caregivers, nursing facilities, assisted living facilities, the street, prison, and so on.

Multiple Levels of Care

Hospice care is provided at four levels: routine home care, general inpatient care (GIP), continuous home care (CHC), and inpatient respite care. Each level provides different levels of skilled care and accessibility to supportive care.

Variable Lengths of Stay

There is substantial variability in hospice patient length of stay, resulting in diverse patient care needs at admission and throughout the patient stay. Although hospice care is intended for patients with a prognosis of 6 months or less, about 30% of hospice patients have a length of stay of 7 days or less. Although half of hospice patients die under hospice care within 23 days, 30% of hospice patients have lengths of stay greater than 2 months.[1] Patients with stays of only a day or two will often have different needs and care goals compared to hospice patients with stays of several months.

Although this is not an exhaustive list of the unique aspects of hospice care, HEART must accommodate these key features. Through testing and further refinement, other unique aspects of hospice care or unique patient situations may emerge that HEART must accommodate. HEART is intended to be a comprehensive assessment tool, and thus it must be structured so that clinicians can continue to use clinical judgment to determine appropriate assessment components for the patient at the time of assessment. Clinicians need to be able to tailor the assessment to patient and family needs and preferences at a highly sensitive time; this is an important aspect of high-quality, patient- and family-centered care. CMS and RTI are committed to developing an instrument consistent with the unique features of hospice care.

1.2.2 Considerations During HEART Development

Several contextual factors are critical to the successful development of HEART. These include the existing CMS requirements of the Medicare Hospice CoPs, considerations of patient and provider burden, and the goal of cross-setting standardization for quality measures.

Existing Requirements: CoPs

The Medicare Hospice CoPs (42 CFR 418.54) provide guidance to hospices on requirements for assessment practice and allow considerable discretion in implementation. The CoPs require hospices to complete an initial assessment within the first 48 hours after the

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[1] National Hospice and Palliative Care Organization. 2016. Facts and Figures: Hospice Care in America. Retrieved from: https://www.nhpco.org/sites/default/files/public/Statistics_Research/2016_Facts_Figures.pdf

election of hospice care. Additionally, the CoPs require that a comprehensive assessment be completed within the first 5 days after election and include the following factors:

- Nature and condition causing admission (prognosis, diagnosis, etc.).

- Complications and risk factors that affect care planning.

- Functional status, including the patient's ability to understand and participate in his or her own care.

- Imminence of death.

- Severity of symptoms.

- Drug profile.

- Initial bereavement assessment of the needs of the patient's family and other individuals, focusing on the social, spiritual, and cultural factors that may affect their ability to cope with the patient's death.

- Need for referrals and further evaluation by appropriate health professionals.

The CoPs require that updates to the assessment occur as the patient's status changes, or at least every 15 days. These updates should consider changes that occurred since the last assessment, the patient's progress towards the desired outcome, and the patient's response to care. Although HEART will not replace existing requirements set forth in the Medicare Hospice CoPs, it is expected to complement the requirements of the CoPs and the existing data collection practices that represent high-quality care.

Burden

CMS is sensitive to the potential burden of data collection on hospice providers and patients and their families. To minimize the burden of data collection, HEART is designed to balance gathering critical information with provider burden in completing the assessment. Specifically, HEART includes only items that are high priority for CMS's areas of interest and affect a large proportion of hospice patients. HEART will minimize data collection when the data could be reliably gathered from other sources. In addition, HEART's data items are structured to allow clinicians to use clinical judgment and perform appropriate assessment components for a given patient. Furthermore, to reduce burden related to potential HEART implementation in the future, HEART is being pilot tested to ensure HEART will align with current hospice assessment practices and workflows.

Cross-Setting Standardization

The ability to use data to meaningfully examine quality of care across the health care spectrum is an exciting development in health care. The potential benefits of interoperable electronic health records include the exchange of information between health care settings, less burden on individual providers, and easier comparisons of quality of care across settings. These goals require the standardization of items and data collection, all gathered and entered precisely

the same way across health care settings, to allow for truly cross-setting items and quality measures.

The IMPACT Act aims to achieve higher-quality care through standardization of items across post-acute care (PAC) settings. This standardization should facilitate more-seamless care transitions as patients move among PAC settings. Hospice is not under the mandate of the IMPACT Act partially because of the distinctiveness of the hospice population and hospice goals of care as well as the holistic nature of the care provided by the multidisciplinary hospice care team. This distinctiveness may restrict HEART developers' ability to use existing items from other settings. For instance, the structure and nature of items used in other health care settings may be burdensome during a sensitive time or may not be relevant given the patient-driven goals of hospice care. Although the hospice setting is not under the mandate of the IMPACT Act, the use of cross-setting items could enable comparisons across settings and future measure development efforts. Thus, HEART includes cross-setting items where feasible to test and explore the potential implementation of these items. However, fidelity to the intent of the hospice model of care may limit the use of cross-setting items in HEART because the model of care in other PAC settings remains primarily focused on curative and restorative efforts.

1.3 Review of Literature and Hospice Assessment Practices

1.3.1 Description of Process for Review of Literature and Hospice Assessment Practices

RTI's process for HEART development included two stages of review of the literature and hospice assessment practices. The first stage included a wide review of hospice assessment practice, the academic and grey literature in palliative and hospice care, and other patient-level assessment instruments used across PAC settings. This provided RTI with an exhaustive list of potential item concepts and care domains for inclusion in HEART. RTI's process for refining that list is detailed below and in Section 1.4. The second stage included iterative reviews to monitor for new developments pertinent to a specific item concept and relevant clinical areas.

Current Hospice Assessment Practices

RTI began with a broad examination of current hospice assessment practices and a detailed review of the literature to inductively determine potential item concepts to include in HEART. RTI gathered hospice assessments from eight hospices of varying sizes and locations and examined the domains covered by the hospices' assessments, their use of standardized tools, and their assessment processes; this allowed RTI to understand how hospices were implementing the assessments required by the CoPs. This scan also included review of two social worker assessments and clergy/spiritual assessments, as well as interviews with three hospices about their process for assessing patients. After a review of these hospice assessments, domains of care emerged on the topic areas commonly covered in hospice assessments. These domains were often overlapping, but provided an organizational framework to continue the review of the literature and hospice assessment practices. RTI organized all potential item concepts covered in the assessments into seven domains of interdisciplinary hospice assessment practice completed as part of the comprehensive patient assessment (discussed further in Section 1.4).

Simultaneously, RTI completed a comprehensive review of hospice and palliative care standardized tools and scales available in the literature. RTI leveraged existing comprehensive literature reviews available from other teams in hospice and palliative care. RTI began with a review of the PEACE (Prepare, Embrace, Attend, Communicate, and Empower) Project (https://innovations.ahrq.gov/qualitytools/hospice-peace-project). The PEACE Project developed quality measures for hospice and palliative care organizations to assess quality of care and target areas for improvement and included a list of recommended assessment instruments for end-of-life care. RTI cross-referenced this review with the Agency for Healthcare Research and Quality systematic review of palliative care assessment tools published in August 2016 and finalized in September 2017 (https://www.effectivehealthcare.ahrq.gov/topics/palliative-care-tools/technical-brief-2017). RTI supplemented these with additional review of domains where there were limited available scales and tools in the literature.

Further, RTI reviewed items and scales in existing PAC assessment instruments currently implemented by CMS (i.e., the Minimum Data Set [MDS], the Outcome and Assessment Information Set [OASIS], the Long-Term Care Hospital Community Assessment Record and Evaluation Data Set [LCDS], and the Inpatient Rehabilitation Facility Patient Assessment Instrument [IRF-PAI]) and other standardized item sets developed for or used in hospice and palliative care (e.g., Hospice Outcome Assessment Tool, interRAI, International Classification Function, etc.). RTI cross-referenced this extensive list of items and scales with the items used by hospices as part of their usual assessment practices. This helped us determine which tools and scales were used in practice versus items and scales that may be available but were not used in clinical practice the hospice assessments.

Finally, RTI posted a national provider call and formed a Clinical Committee comprised of hospice organizations from across the United States to participate in the early development of the assessment. This Clinical Committee provides RTI with organizational and clinical perspectives that inform the development of items and quality measures, improving RTI's understanding of how the implementation of the assessment tool affects hospices.

1.4   Development of Draft Items

The review of the literature and hospice assessment practices revealed eight domains of interdisciplinary hospice assessment practice completed as part of the comprehensive patient assessment. The caregiver assessment domain was integrated into other domains because of overlap between the domains (e.g., psychosocial items that could be applied to patients and caregivers). This resulted in seven domains for HEART development:

1. physical symptom management;

2. diagnosis and prognosis;

3. cognitive and functional status;

4. safety and environment;

5. psychosocial assessment;

6. patient and family preferences; and

7. access, communication, and care coordination (note: this domain is inclusive of the knowledge and learning domain and was re-named in response to CMS suggestion).

Within each of these domains, RTI created a list of potential "item concepts" of interest for further development and consideration. These lists were initially exhaustive, and were refined using the following criteria: that the item concepts would be (1) relevant to CMS's goals (for future quality measure development, care planning, and/or case-mix), and (2) harmonized with high-quality clinical assessment at the bedside. The content and item structures for these item concepts were then further developed.

In each domain, RTI refined the list of item concepts with thorough input from clinical consultants and item set experts. Input was gathered through workgroup meetings focused on specific domains, reviews of the literature, and opportunities for written input. In discussions with clinical consultants, an item concept's utility for the goals of HEART (care planning, quality measure development, or payment refinement) was one of the major points of discussion. After clinical input, RTI updated and solicited CMS input on the refinement of item concepts with input from CMS stakeholders. Only item concepts that were most pertinent for CMS's goals moved on for further item development. After refining the item concept list within each domain in this stepwise manner, RTI then developed item wording for each item concept with input from clinical consultants and item set experts, knowing that any draft wording would be subject to usability and feasibility testing, further revisions, and so on. RTI included concepts and structures from existing PAC CMS item sets when they aligned with hospice clinical practice. For instance, the overall item set structure is similar to the MDS. Additionally, items from the MDS, OASIS, LCDS, and IRF-PAI were used as the basis for HEART items when appropriate. Also, RTI included concepts and structures from hospice/palliative care scales and tools when they were relevant to CMS's goals. Specific tools or scales were included only where the existing literature or input from clinical experts suggested that there was a strong rationale for its inclusion. Thus, HEART is distinct from existing comprehensive hospice and palliative care assessments that are intended to be completed in full in that HEART allows clinical flexibility to administer the most important elements of the assessment. Therefore, HEART allows clinicians the flexibility to use their clinical judgment to provide appropriate patient-centered assessment and care, consistent with the standards of high-quality hospice care.

RTI continued with a second stage of review once the refined list of item concepts and item wording was developed, reviewing the literature for scales and tools pertinent to a specific item concept in development. In some cases, this targeted scanning was a result of discussion with clinical or other experts, who may have suggested continuing to look for alternative or optimal language.

1.5 Types and Frequency of HEART Assessments

If HEART is to reflect quality of care and resource intensity throughout the hospice stay, repeated assessment of patients may be necessary as care needs change over time. At the same time, HEART seeks to balance the desire for ongoing assessment of patients as care needs change with the goal of minimizing burden on providers and patients by providing adequate flexibility. The initial drafts of HEART include assessments at different timepoints (i.e., admission, interim, and discharge) to capture care needs throughout the patient's hospice stay;

these will be pilot tested to better understand how to best balance the needs of the patient, the desire for repeated assessments throughout the patient stay, and provider burden.

1.5.1 Admission Assessment—Purpose/Goals

The admission assessment is intended to provide a comprehensive picture of patient and family care needs at admission. Further, this assessment is intended to capture quality of care related to identifying and beginning to meet those needs and the resources the hospice will have to deploy to do so. Also, the aim was to harmonize the HEART admission assessment with the comprehensive admission required by the Medicare Hospice CoPs. However, HEART will not replace the Medicare Hospice CoPs' requirement for a comprehensive assessment.

1.5.2 Interim Assessment—Purpose/Goals

The interim assessments are new to hospice. They are intended to capture major changes in patient and family care needs during the hospice stay, the quality of care in identifying and meeting those needs, and the resources the hospice will have to deploy to do so. These interim assessments should capture care needs throughout the patient stay to enable a more-comprehensive view of hospice care. The HEART interim assessments are aimed to align with the update to the assessment required by the Medicare Hospice CoPs. However, there are several potential options for the exact timing and content of the interim assessments; these options are discussed under Section 2.3.1.

1.5.3 Discharge Assessment—Purpose/Goals

The intent of the discharge assessment is to retrospectively capture the care that was delivered toward the end of the patient's hospice stay. This assessment was designed to be an expanded HIS Discharge. Many of the HIS Discharge items are included in the HEART Discharge assessment (e.g., the HIS Visits items) with the inclusion of additional items to capture a broader view of hospice patent care at discharge.

SECTION 2
NOVEMBER 2017 TECHNICAL EXPERT PANEL MEETING

2.1   Purpose of Meeting

RTI International hosted a technical expert panel (TEP) meeting to explore implementation and content related topics before the pilot testing of the Hospice Evaluation & Assessment Reporting Tool (HEART) instrument. This TEP meeting focused on the feasibility and usability of the draft HEART instrument as well as identifying potential barriers to pilot implementation. RTI initiated the TEP meeting with a presentation summarizing the development of the HEART instrument to date. This included the goals of HEART (i.e., potential usefulness for care planning, quality measurement, and payment reform efforts); the contextual factors influencing HEART development (e.g., unique aspects of hospice care, provider burden, requirement of conditions of participation [CoPs]); the process that the Centers for Medicare & Medicaid Services (CMS) and RTI have undergone so far (e.g., review of the literature and hospice assessment practices); the current assessment forms: assessments on admission, during the interim, and at discharge; and the next steps for HEART development.

2.2   Topics Discussed

The TEP discussion centered on how the draft HEART tools will be deployed in pilot testing, including the source of data for HEART, the timing of the assessments, and the HEART interim assessments. The HEART interim assessment discussions centered around the timing of the interim assessments and how to gather information on hospice patients whose stay may last for several months. Although focused on the pilot implementation, these discussions have implications for HEART's larger implementation pending pilot findings.

2.3   Meeting Description

On July 26, 2017, RTI posted a Call for TEP and a TEP Nomination Form on the CMS website to initiate TEP member recruitment. The Call for TEP was disseminated through national hospice provider associations, previous TEP applicants, and other stakeholder organizations. The previous TEP applicant notification included those that had previously participated on a TEP, as well as those that had applied, but were not selected. For this TEP, there was a preference for participants who had not previously served on a prior TEP. The previous TEP applicant notifications included a request to disseminate the Call for TEP to those that might be interested in applying. At the close of the nomination period, CMS and RTI finalized the TEP composition by selecting 16 nominees with diverse backgrounds, a range of perspectives, and varying areas of expertise. Additionally, these nominees represented hospices that served varying patient populations (e.g., urban, rural) and organizational characteristics (e.g., profit status, size). One nominee stepped down from the TEP before the first meeting, resulting in 15 TEP members (Appendix 1).

On November 2, 2017, and November 3, 2017, RTI convened a TEP meeting to inform the direction, implementation, and development of the HEART instrument for the CMS Hospice Quality Reporting Program (HQRP). During this meeting, the TEP explored implementation topics focusing on how HEART will be deployed in pilot testing. These topics included (1) the timing of HEART, with a particular focus on how and when an interim assessment should be deployed; (2) adapting HEART to special settings, such as nursing homes; (3) tailoring HEART

for special populations, such as minimally responsive and imminently dying patients; and (4) aligning HEART with current practices. Both meetings were held via webinar. The TEP discussion was facilitated by Ila Broyles and the project director, Franziska Rokoske.

2.4   Summary of TEP Discussion

2.4.1   HEART Interim Assessments

CMS is interested in creating an interim assessment to assess major changes in patient needs during the hospice stay. Because responsiveness is a hallmark of high-quality hospice care, CMS aims to assess quality of care throughout the hospice stay rather than only at admission and discharge. An interim assessment could be used to develop process and outcome measures to assess quality of care throughout the hospice stay, particularly assessing symptom burden for patients and caregivers. To explore potential strategies for interim assessments, RTI initially conducted interviews with their Clinical Committee of hospices previously described in the Review of the Literature and Hospice Assessment Practices section of this document. From these interviews, it became clear that hospice agencies have varying operational definitions of the update to the assessments required by the CoPs, and that their reassessment schedules and types of reassessments are patient- and hospice-dependent. For instance, the Clinical Committee explained that some patients are reassessed weekly, some are reassessed every other week, and those that are unstable may have a full head-to-toe assessment every 24 hours or even more frequently when they are receiving a higher level of hospice care (i.e., continuous home care [CHC], general inpatient care [GIP]). Furthermore, some visits and reassessments are unpredictable and occur on an as-needed basis (e.g., if a wound opens, if a fall occurs). Thus, hospices' approach to the assessment update varied widely. These results were presented to the TEP, and the TEP confirmed the variability of assessment updates and agreed that HEART should have the flexibility to accommodate this variability.

RTI also solicited input on the potential timing for a standardized interim assessment; we asked the Clinical Committee how they would recommend creating a standardized interim assessment based on the Medicare Hospice CoPs requirement that updates to the assessment occur as the patient's status changes, or at least every 15 days. The Clinical Committee did not recommend implementing a standardized assessment every 15 days. The Clinical Committee explained that they felt that for most stable hospice patients, a standardized assessment every 15 days would be too frequent and burdensome for patients, families, and providers. They also felt that there was no strong clinical rationale for a standardized assessment every 15 days on stable patients. Instead, the hospice agencies made varying suggestions for potential standardized reassessment time points, including when the patient transitions to imminently dying, when there is a change in the patient's level of care (i.e., to GIP or CHC), every 60 days or recertification, and at the midpoint of the patient's stay (although this would be a retrospective assessment).

On the basis of the results of these interviews and discussions with our clinical consultants, RTI presented several potential strategies to deploy interim assessments to the TEP, including the following assessments:

- Assessments at shorter, pre-specified intervals (e.g., every 15 days).

- Assessments when a patient changes care settings.

- Assessments when the patient transitions to imminently dying.

- Assessments when a patient changes level of care.

- Assessments for long-stay patients.

TEP members discussed potential trade-offs for each of these strategies, including the degree to which these assessments would harmonize with existing clinical practice, the ability to capture most hospice patients (i.e., the usefulness of the items depending on how many patients would be assessed), and the importance of capturing data on quality of care and resource deployment in reaction to changing patient status.

Themes emerging from this discussion included curiosity about the purpose of an interim assessment, the feasibility of meaningful data collection at an interim time, and the patient and provider burden that numerous standardized assessments could cause. Key discussion points included how various types of assessments would interact and the potential that a single patient, depending on the criteria for the interim assessment, could have multiple assessments within a short period. Additionally, there was agreement that there should be a limit on the number of assessments, given that some patients change level of care multiple times and some patients may transition to imminently dying more than once. For example, in a scenario where a patient was in a pain crisis, and therefore changed level of care, and 2 days later was imminently dying, what would happen? The major concern is that this would be too much reporting with limited benefit to CMS, providers, patients, and families.

Potential Types of Interim Assessments

    a) Shorter Pre-Specified Intervals (e.g., 15 days)

RTI solicited TEP input on whether a shorter pre-specified interval (e.g., every 15 days) would work as a potential routing trigger for an interim assessment. The TEP discussed the pros and cons of using a shorter pre-specified time interval, and the following concerns and issues were raised during the discussion:

- Because patient needs are constantly changing, there could be limited value in a "snapshot" of a patient's status on a particular day (triggered by a pre-specified assessment interval).

- Reassessments at pre-specified intervals might place unnecessary burden on providers, patients, and families.

- Skip patterns could be used to reduce burden. However, that could lead to questionable utility of the data for quality measure development because denominator issues could result, especially for smaller hospices.

Some TEP members discussed their historical experiences with Minimum Data Set (MDS) implementation to provide additional context for their discussion and comments. There was discussion about wanting to avoid a situation in which HEART becomes "the driver of care." Overall, there was agreement that a shorter, pre-specified interval should not be used to trigger an interim assessment.

b) Changing Settings

RTI solicited TEP input on whether changes in setting, such as moving to or from a nursing home or residential care facility, should be a potential trigger for an interim assessment. The following merits and issues with this approach were discussed:

- Not all changes in settings of care are worsening or stabilizing. Some changes in settings are not relevant to the patient's level of care and are instead merely geographical changes.

- Although assessments are often conducted as part of a setting change, changing settings often does not change the patient's plan of care.

- However, the process of assessment and the coordination of the setting change does involve hospice resources.

The TEP members recommended collecting setting change data, but did not recommend using setting change as a trigger for an interim assessment. Instead, the TEP members recommended that setting change data could be gathered retrospectively through the discharge assessment. For example, an item could be added to the discharge assessment to collect data on the number and type of setting changes that the patient incurred throughout their stay. If this information was gathered retrospectively, CMS would have information about the resource-intensive process of patients changing settings, but hospices would not have to collect and report this information in real-time.

c) Imminently Dying

RTI also solicited TEP input on using a change in patient medical condition as a trigger for an interim assessment, specifically when patients transition to imminently dying. When asked about their own definitions of imminently dying, it became clear that hospices vary in how they define imminently dying. To ultimately implement an interim assessment using imminently dying as a trigger, consensus would need to be reached on a definition for those that are imminently dying. Merits of an interim assessment when patients transition to imminently dying discussed by the TEP include the following:

- This data would be rich, meaningful, and relevant to both quality of care and resource use for the hospice at a time when there are major changes in patient needs.

- This assessment would capture interim data for most hospice patients, as most patients do die during their hospice stay.

- Imminently dying patients require more resources; therefore, it is important for hospices to identify patients that are transitioning to imminently dying to ensure that these patients and families are receiving the care that they need.

- Reassessment when patients transition to imminently dying is important because spiritual and other preferences may have changed (e.g., wanting a member of the clergy present).

- The imminent death assessment could be useful as a benchmark for hospices. Specifically, this information could be used as part of quality improvement efforts to see if a hospice is below the national average for completed assessments before death; if a hospice is not routinely identifying patients who may be imminently dying, then the hospice may need to consider conducting more visits.

  – The TEP members noted that the measurement of visits through the Hospice Item Set (HIS) Hospice Visits when Death is Imminent measure drove an analogous change in practice that might be mirrored by the requirement for an imminently dying assessment. That is, the hospices worked to improve their processes because they realized that they were not doing a very good job of identifying patients transitioning to imminently dying, and were therefore not providing the visits that the patient needed.

Issues and challenges related to this interim assessment include the following:

- Using a change in medical condition as a trigger for reassessment (including imminently dying) will always be difficult because of changing patient status at the end of life.

- Consistently identifying patients who are imminently dying is a challenge. Although hospices can and do identify patients who are imminently dying, it can sometimes be hard to predict whether a patient has transitioned to imminently dying. Some patients die suddenly and without identifiable signs and symptoms. Additionally, some patients seem to be imminently dying and then recover.

- Hospices have somewhat varying definitions of imminently dying. Most TEP members use "hours to days" language. Two use "less than a week," and one TEP member said that their hospice defines imminently dying as dying within days versus within weeks.

- Successful prognostication is more difficult for certain diagnoses, particularly when patients have a longer stay in hospice. It was suggested that hospices are typically able to identify imminently dying patients on admission, but as the patient length of stay increases, the hospices become less accurate at identifying these patients. This is probably because the providers do not recognize changes in the patients because they are so gradual.

  – Not all patients go through a dying process; some patients, such as cardiac patients, may die suddenly.

  – Sometimes dementia patients are hard to identify as imminently dying because they look bad one day and then bounce back.

- Hospices have varying processes or standards for identifying patients that are imminently dying. TEP members stated that the clinical signs currently listed in the draft HEART instrument as "signs and symptoms of imminent death" are used in

practice. Other methods for identifying patients as imminently dying included the following:

– A Palliative Performance Scale score of 20% or less

– Identifying acute changes in condition (e.g., a patient that is suddenly unresponsive or has sudden respiratory changes)

– Assessment of level of consciousness, vital signs, and symptom burden.

Despite these challenges, the TEP emphasized that the transition to imminently dying is a major patient status change and worthy of further investigation because of the richness and meaningfulness of the data compared with other potential reassessments.

Input on Content

Numerous factors were identified as important to reassess when a patient transitions to imminently dying, including symptom burden, patient agitation, psychosocial factors, and caregiver coping and distress. Also, there was a question of the advantages of collecting this data as an interim assessment versus retrospectively on the discharge assessment. Overall, there was agreement that physical symptom assessments are the priority when patients are imminently dying. Other recommendations included the following:

• Adding items related to spiritual care because without these items, it may inadvertently indicate that spiritual care is lower priority.

• Ensuring that patient wishes are identified and are met.

• Assessing psychosocial issues, bereavement risk, and complicated grief.

• Assessing symptoms that are distressing for families, including agitation and respiratory secretions.

d) Changing Level of Care

The TEP also discussed the merits and challenges of a reassessment after a patient changes level of care (i.e., the four levels of hospice care: respite care, routine home care, GIP, CHC). Specifically, there was support for a reassessment that would occur after a patient increased level of care (e.g., an increase from routine home care to CHC). Support for this reassessment trigger was based on the potential for this assessment to reflect high-quality care and increasing intensity of hospice resource use. Issues and limitations raised by the TEP included the following:

• An assessment after every level of care change would be too burdensome, especially because patients can switch back and forth between levels of care numerous times.

• Many patients die once they have been moved to a higher level of care; therefore, this data would be captured in an imminently dying reassessment. For example, one TEP member mentioned that in her hospice, about 70% of patients die in GIP.

- There is potential for an unintended consequence of nurses not transferring patients to a higher level of care when necessary because of reporting requirements.

RTI also solicited TEP input on the frequency of changes in level of care, as the number of patients for whom this data would be gathered could inform its potential usefulness. RTI analysis suggests that approximately 12% of patient stays that begin in routine home care transition to CHC or GIP during the stay. TEP members agreed that the relative infrequence of these transitions would be a limitation of such an assessment, as this data would be gathered for a minority of patients.

Input on Content

The TEP members stated that a reassessment after an increase in level of care would probably look very similar to the reassessment for a patient that is transitioning to imminently dying. Specifically, this reassessment would include an assessment of physical symptoms, including respiratory secretions and patient agitation. It was also mentioned that the reassessment should include assessment of anxiety symptoms, especially if a change in setting has occurred.

e) Long-Stay

RTI solicited TEP input on assessing patients who may have longer periods (months to years) in hospice. Overall, the TEP members understood the desire to gather information as patient stays in hospice became closer to several months. RTI began the discussion with a proposal of a reassessment occurring every 60 days for the purposes of discussion. At 60 days, a reasonable number of patients who would have survived, but they may have emergent needs that were not captured in the initial assessment. However, the TEP members made the following recommendations:

- Beginning at 90 days and then repeating at other recertification dates would be in alignment with their current clinical workflow for recertification, including a physician assessment. At the 90-day mark and other recertification dates, hospices do a comprehensive overview of the patient and their care.

- A 90-day assessment would create less burden than a 60-day assessment.

Additionally, the TEP members, although they did understand the potential for emergent needs, solicited information on what this data would be used for and why CMS would require this information or find it useful.

f) Implications for HEART Development Pilot Testing

Both the Clinical Committee and the TEP strongly disagreed with a reassessment that would occur at **short, pre-specified intervals** (e.g., every 15 days). We will therefore not be pilot testing an interim assessment at a short, pre-specified interval. Additional feedback from the TEP included that there are resource considerations when a patient **changes settings**, but often, patient care needs do not fluctuate during this time. On the basis of this feedback, we will not pilot test an interim assessment when patients change settings, but we will ask pilot sites to discuss the utility of an item on the discharge assessment that identifies patient setting changes.

There was consensus that a reassessment when a patient transitions to **imminently dying** would be meaningful because it would capture major patient care changes and provide rich data for quality measure development for most hospice patients. However, TEP members pointed out that this assessment trigger will pose certain challenges related to hospice agencies' abilities to consistently identify patients that are imminently dying. Additionally, the TEP members recommended that we add items to the imminently dying interim assessment surrounding patient or caregiver needs, patient preferences, and spiritual beliefs and values. On the basis of this feedback, we will pilot test an interim assessment to occur when patients transition to imminently dying. We will also include items in this assessment related to patient or caregiver needs, patient preferences, and spiritual beliefs and values. Finally, we will request feedback from the pilot sites related to their ability to identify patients that are imminently dying, how their hospice defines imminently dying, and the advantages of collecting this data via an interim assessment versus retrospectively through the discharge assessment.

The TEP members generally agreed that an interim assessment that occurs when patients **increase level of care** would be meaningful because it would capture data when patient care needs change significantly during a resource-intensive time for the hospices. The TEP members thought that this trigger for reassessment is clear, and that the content should be similar to the suggestions for the imminently dying interim assessment. However, the TEP members also discussed that this reassessment is **unlikely to capture a significant number of hospice patients** and that many patients transition to imminently dying in close proximity to an increase in level of care. On the basis of this feedback, we will be pilot testing an interim assessment when patients increase level of care using similar content as the imminently dying interim assessment. Additionally, we will add items to the imminently dying assessment to enable data collection on the patient's level of care, and whether there was a change in the level of care.

Finally, the TEP members understood the desire to collect data on **long-stay** hospice patients, but most TEP members suggested that, compared with a 60-day reassessment, a 90-day reassessment would align better with clinical workflow because of recertification timing. On the basis of this feedback, we will pilot test both an every-60-days and an every-90-days interim assessment.

2.4.2   Special Populations to Consider in the Assessments

RTI first solicited the TEP's input on the major special populations that the admission assessment should account for, through either a subset of items or different items. Although hospice has a wide variety of patient populations, we have identified two major patient populations that we think may require a smaller subset of items:

- Those that are imminently dying at admission. Although some patients are admitted when stable, with a prognosis of less than 6 months, other patients are admitted when they are imminently dying, with a length of stay, in some cases, of only a few hours. After discussions with our Clinical Committee and clinical consultants, the imminently dying population on admission was identified as one that might require a smaller subset of items so the hospice can immediately address high-priority patient and family needs

- Those that are minimally responsive. RTI identified this population with the help of clinical consultants. Not all items will be relevant or feasible when a patient is minimally responsive (e.g., hearing, vision).

The TEP members agreed with RTI's identification of the major special populations of imminently dying and minimally responsive, although they did mention a few other unusual cases (1) patients that are truly alone, including advanced dementia patients that have someone watching over them that is not family, (2) patients admitted in a pain crisis (the chaplain and SW may not be able to assess in-person within the first 5 days of admission, patient may refuse questions, focus is on the crisis symptom), and (3) pediatric patients.

Imminently Dying at Admission

RTI solicited TEP input on the assessment of patients who are imminently dying at admission. Overall, TEP members affirmed that HEART should explicitly accommodate patients who may have only hours in hospice care. TEP members appreciated that the draft HEART instrument would consider the challenges of assessing patients who may be imminently dying upon admission. One TEP member relayed that the current HIS quality measures are hard for hospital-based hospices because they serve so many imminently dying patients on admission.

To begin the discussion, RTI sought to understand how hospice clinicians would define and identify patients who are imminently dying. TEP members had broad consensus in defining imminent death (Most hospices use similar criteria, with a prognostic estimate of "hours to days." A couple of hospices use "less than seven days," and one hospice uses "days versus weeks"). For challenges related to identifying and defining imminent death, refer to Section 2.3.1c. To inform the piloting process, particularly how a patient might be flagged as imminently dying and thus require a subset of HEART items, RTI solicited information about how hospices communicate that a patient may be transitioning to imminently dying. TEP members explained that communication about patients who may be imminently dying tends to include notifying the interdisciplinary team (IDT) members that an imminently dying care plan has been activated. This communication occurs through numerous channels, including secure messaging through an electronic health record (EHR) vendor system and during morning stand-up and evening stand-down meetings.

To shape pilot testing, RTI solicited TEP feedback on the highest-priority items to include on an admission assessment for imminently dying patients. RTI shared a proposed list of items to obtain this feedback. The TEP discussion generally affirmed the potential items. Additionally, the TEP members explained that sometimes, for patients that are imminently dying at admission, the hospices will only conduct a focused admission assessment instead of a comprehensive assessment. This would occur if the imminently dying patient was having significant, specific issues (e.g., if the hospice needed to focus on getting pain under control).

Minimally Responsive

RTI first solicited input on how hospices identify minimally responsive patients, given that responsiveness can vary hour-to-hour at the end of life. Discussion with the TEP alerted RTI to the importance of making a distinction between minimally responsive patients and patients who are cognitively impaired and may have difficulty answering questions. Discussion

with the TEP also gave rise to several themes that clarify the challenges of assessing such minimally responsive patients in a standardized manner:

- TEP members agreed that being minimally responsive is hard to define, and that although they understand what minimally responsive means clinically, they struggled to define it in words.

- TEP members were careful to state that items may need flexibility to allow a patient proxy to respond.

- Although responsiveness can vary at end-of-life, TEP members shared that they do not make repeated attempts to assess patients that have varying levels of responsiveness. Instead, as team members are able to assess patients with varying levels of responsiveness, they communicate updates through the EHR.

Additionally, RTI solicited information on the highest-priority items to include on an admission assessment for minimally responsive patients. The TEP members explained that for some items, although minimally responsive patients cannot respond, others, such as the family, can answer the questions. For example, when a patient is minimally responsive, spiritual and cultural belief items will be completed with the caregiver, not the patient.

Implications for HEART Development and Pilot Testing

On the basis of the TEP's feedback that the imminently dying and minimally responsive patient populations may need a different assessment process, RTI will pilot test with skip patterns for these special populations. RTI also will gather additional feedback from the pilot sites related to items that are appropriate for these special populations, how they identify and define these special populations, and whether we should consider any other special populations.

2.4.3   Special Settings

Hospice care is delivered in multiple settings, including the patient's private residence, nursing facilities, residential care facilities, and inpatient facilities. RTI aimed to build flexibility into HEART items; not all items will apply to all patients in different care settings. For example, in the nursing home setting, it might not make sense to ask about the patient's living situation and their caregiver's availability. Additionally, care teams in different settings tend to have different processes. For instance, information may flow differently in the nursing home setting between hospice staff and nursing home staff that are completing the MDS. For these reasons, RTI wanted to explore the implications of special settings on the development of HEART.

RTI solicited input on the role of other assessment instruments in completing HEART, particularly the role of the MDS for nursing home patients. TEP members agreed that hospices currently do not use MDS documentation to assist with their assessments. This is because typically, hospices have found that the MDS documentation is not available, is not complete, and is too old when patient status rapidly changes at end-of-life. There was consensus among the TEP members that the MDS would not likely be a useful information source for hospice team members attempting to complete HEART.

Another major theme was concern that, because CMS would be gathering information for nursing home residents receiving hospice from the MDS and HEART, hospice and nursing home assessments might be viewed as contradictory. TEP members explained that the nursing homes and hospices face differing quality metrics and have differing value systems. Therefore, the assessments are going to be completed from a different perspective. Because of this, and because of the difference in timing of assessments, the TEP members said it would be inappropriate to compare nursing home and hospice documentation.

Implications for HEART Development and Pilot Testing

On the basis of the TEP feedback, RTI will gather patient setting information during the pilot. Additionally, RTI will ensure that an adequate sample of assessments is collected from varying settings during the pilot test. RTI will further inquire as to whether hospices use the MDS when completing HEART. Finally, RTI will explore setting-specific implications with the pilot sites during qualitative interviews.

2.4.4 Workflow Integration

During the development of HEART, RTI and CMS were cognizant of potential increases to provider burden. With this in mind, RTI aimed to create an instrument that would align with current practice processes. Given the interdisciplinary nature of hospice and the goal for a truly comprehensive patient assessment, RTI solicited TEP input on how different team members would interact with HEART and how this interaction might vary by assessment, setting, and other special circumstances.

To better target our questions during the pilot, RTI asked for TEP input on how HEART might be completed, and who within the hospice might complete the HEART instrument. TEP members provided insight into the current staffing and workflow in their hospices and provided insight into the hospice staff that might complete HEART; the interaction of HEART with IT systems, including EHRs; and how HEART might interact with the interdisciplinary care team meetings.

One of the major themes discussed was the workflow of the admission nurse versus the case manager nurse. The admission nurse touches on everything in the initial assessment. Then, the case management nurse goes the next day to follow up with more-comprehensive assessment. Upon hearing that RTI expected the HEART admission assessment to be aligned with the 5-day window for the admission assessment, TEP members suggested that the case management nurse would most likely be completing the HEART tool (not the admission nurse). However, one TEP member mentioned that at their hospice, there is no admission nurse, so the case management nurse completes both the initial and comprehensive assessments. Other TEP members suggested that a combination of the admission nurse, case management nurse, and social worker would complete the HEART admission assessment.

Another major factor that may shape implementation is how HEART is built into hospice EHR systems by vendors. During the discussion of interdisciplinary collaboration for filling out the HEART instrument, one member explained that logistically, it becomes difficult to appropriately abstract data when the items are built into a specific visit or discipline inside the EHR. For instance, perhaps some items should be left out of the nursing assessment and

assigned to a social worker visit because they involve content that is typically explored more thoroughly by the social worker. However, this could be an issue because the social worker could have their visit refused, which would then leave those items unanswered when it was time to report the data. Instead, you would have to repeat the items throughout the different providers' assessments to ensure that the data was collected. The TEP member also explained that for the HIS, their hospice asked the EHR vendor whether it was possible to include the same item in two separate locations. However, the EHR vendor explained that this would create a data abstraction issue because if the item is answered more than once, there is no way to decide which entry should be the default.

TEP member input also reflected that hospices currently use discretion in the occurrence and flow of IDT meetings. The TEP members explained that IDT meeting schedules vary (e.g., some meet every 2 weeks, whereas others meet every week). The first IDT meeting tends to happen during the first week of the patient stay, but not necessarily within the first 5 days. For the formal IDT meetings, the hospices have a place in the EHR where the IDT charts together. This usually appears as an update to the patient's plan of care (e.g., identified problems, what the providers are working on, what is happening with the patient, whether there is anything the patient needs team support for). However, these IDT chart entries are usually free text rather than structured data fields.

Implications for HEART Development and Pilot Testing

On the basis of TEP input, RTI will not be prescriptive during the pilot test as to which providers should complete certain assessment sections. Instead, RTI will explore with the pilot sites who they selected to complete each section, and how they anticipate HEART could be integrated into their workflow in the future. We will also solicit pilot site feedback on modifications that could be made to HEART to better align the assessments with current practice.

2.4.5   Next Steps for HEART Development

RTI will revise the HEART item sets and pilot testing plan based on the feedback received from the TEP. Additionally, RTI will complete further discussions with CMS and federal hospice experts to finalize the approach for Pilot Test A (see below). RTI will then conduct HEART pilot testing. RTI will solicit feedback from the TEP on the pilot test results as well as the Patient and Caregiver Workgroup. Finally, the HEART instrument will be refined on the basis of the findings from the pilot tests and TEP feedback. More information related to the pilot approach, future TEP interactions, and the Patient and Caregiver Workgroup can be found below.

Pilot Approach

To thoroughly pilot test the draft HEART instrument, RTI will conduct two sequential pilots (Pilot A and Pilot B). The focus of the pilots will be twofold. First, the pilots will evaluate the feasibility of implementing the HEART instrument by examining provider data collection methods, disruption of current clinical practice, and experiences of undue provider burden. These evaluation areas will give RTI and CMS insight, before national testing, into issues that could affect the reliability and validity of HEART data items (and thus any quality measures that

could be developed using HEART items). Second, the pilots will ascertain the usability of the piloted items to capture the key concepts integral to HEART's purpose. In Pilot A, RTI will identify issues in item wording and needed refinements of HEART data items to best capture the item concepts. RTI will then use the findings from Pilot A to revise the HEART assessment prior to the start of Pilot B. The revised instrument will then be tested during Pilot B to identify further issues in item wording and needed refinements of HEART data items to best capture the item concepts.

TEP Interaction

RTI will use a webinar format to present findings from HEART Pilot A to a workgroup of TEP members to further inform Pilot B. Revisions based on this feedback will be made to the HEART assessments. Then, RTI will host an in-person TEP meeting to discuss the findings from Pilot A and Pilot B and present insights from the Patient and Caregiver Workgroup.

   a) Patient and Caregiver Workgroup

The Patient and Caregiver Workgroup provides RTI with a unique opportunity to explore end-of-life experiences of patients and caregivers. This workgroup was initiated because CMS's statement that engaging patients and families in the item and measure development process is a priority to ensure that "quality measures are developed that are of value to persons, families and providers and are informative in decisions about care." This process, detailed in the CMS Measures Management System Blueprint v13.0, includes incorporating patients and families in TEPs. However, it has historically been very difficult to obtain input from caregivers of current and deceased hospice patients as part of the formal TEP process; caregivers report feeling intimidated and vulnerable sharing their inputs in a forum such as a TEP meeting. Because caregiver input is essential to understanding what matters to them with respect to quality measure development and public reporting of hospice data, RTI employed a novel alternate approach that respects caregivers' limitations to participation, and enables their input to be shared with TEP groups. This workgroup is essentially a Person or Family-Representative Only TEP, as it is described in Blueprint v13.0 starting on page 97. We call this TEP our Patient and Caregiver Workgroup. The workgroup includes a diverse range of perspectives, featuring various care settings (home, nursing home, inpatient hospice unit, etc.), terminal conditions, and lengths of stay. By exploring HQRP topics with patients and caregivers outside of the typical TEP setting, RTI will be able to obtain valuable patient and caregiver input. Further, the formal HEART TEP will greatly benefit from understanding patient and caregiver experiences, and CMS's goal of engaging patients and families in the development process will be achieved. RTI plans to engage the Patient and Caregiver Workgroup to inform the continued development of HEART, including before the in-person TEP and after the pilots.

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APPENDIX 1:
TECHNICAL EXPERT PANEL MEMBERS

Ann Marie Ackerman, BSN, MBA, RN, CHPN

Ann Marie Ackerman is the Vice President for Patient Care at Hospice and Community Care in Lancaster, PA. She is a registered nurse with forty years of experience in various settings, and over fifteen years of experience in the hospice setting. She has extensive experience in quality assessment and performance improvement, and she currently oversees clinical services as well as the quality and compliance program at her hospice organization.

Ms. Ackerman received her BS in Nursing from the University of Delaware and her MBA with a specialization in Health and Medical Services Administration from Widener University.

Ashley Albers, DO

Ashley Albers serves as the Hospice Medical Director for Four Seasons Compassion for Life in Flat Rock, NC. In her current role, she works closely with the hospice compliance team to evaluate use of hospice services and resources. In addition to her administrative role, Dr. Albers sees patients clinically across a variety of care settings. Dr. Albers is board certified in Internal Medicine and Hospice and Palliative Care.

Dr. Albers received her BS in Chemistry and Mathematics from Salem College and DO from A.T. Still University of Health Sciences Kirksville College of Osteopathic Medicine. Dr. Albers completed her residency in Internal Medicine at the University of Medicine and Dentistry of New Jersey School of Osteopathic Medicine and her fellowship in Hospice & Palliative Medicine at the Mountain Area Health Education Center.

Stephanie Bailey, RN, CHPN

Stephanie Bailey is an Administrator at Heart Hospice in Lafayette, LA. She has been in the hospice industry for ten years serving in various roles including case manager, clinical supervisor, and director of nurses and administrator. In her current role, she leads and participates in the Quality Assurance Performance Improvement Program and ensures that hospice personnel stay current with clinical information and practices.

Ms. Bailey received her BS in Nursing from the University of Louisiana at Lafayette.

Amy Beasley, RN, DNP

Amy Beasley is the Hospice Compliance Nurse with Hospice of West Alabama in Tuscaloosa, AL and an Assistant Clinical Professor at the University of Alabama Capstone College of Nursing. Within the hospice industry, she has worked as a staff nurse, case manager, and admissions nurse. Additionally, in her current position, she provides direct patient care and works administratively toward achieving quality improvement and providing staff education.

Dr. Beasley received her BS in Commerce & Business Administration and her BS in Nursing from the University of Alabama. Also, she received her Masters in Nursing in Rural Case Management and her Doctorate of Nursing Practice from the University of Alabama. Currently, she is pursuing her PhD in Nursing with a focus on palliative care access for rural and underserved populations at the University of Alabama Birmingham.

Regina Bodnar, RN, MS, MSN, CHPCA

Regina Bodnar is the executive director of Carroll Hospice in Westminster, MD. Ms. Bodnar has over 30 years of hospice industry experience including clinical experience providing direct patient care and administrative experience. Additionally, she is currently serving as the President of the Hospice and Palliative Care Network of Maryland.

Ms. Bodnar received her BS in Nursing from the University of Rochester, her MS in Anatomy from New York Medical College, and her MS in Nursing from Yale University.

Tara Brodbeck, MS, RN

Tara Brodbeck serves as the President and CEO of Hospice of the Miami Valley in Xenia, OH. Ms. Brodbeck has been in the hospice industry for 24 years with experience as a founder, owner, and provider of hospice services. She also currently serves as the President of SolaceCare for its Community Palliative Care Program, and as co-founder of CareDesigns, a Care Continuum consulting company. Additionally, she previously served as a National Director on the Board of Directors for the National Hospice and Palliative Care Organization and as the Chair of the Hospice Quality and Standards Committee of NHPCO.

Ms. Brodbeck received her Diploma in Nursing from Miami Valley Hospital School of Nursing, her BS in Nursing from Wright State University, and her Masters in Nursing Administration from Wright State University.

Pamela Burford, RN, MS

Pamela Burford serves as the Vice President of Clinical Operations at AseraCare Hospice in Ft. Smith, AR. Ms. Burford has experience providing direct patient care, has thirty-five years of quality management experience, and is currently responsible for leading and directing the company-wide strategy for implementing clinical practices and outcome measures to provide the highest quality services.

Ms. Burford received her Diploma in Nursing from Methodist School of Nursing, her BS in Health Arts from the College of St. Francis, and her MS in Health Care Administration from the College of St. Francis.

Jeanette Dove, MA, RN, CHPN

Jeanettte Dove is the Executive Vice President and Chief Quality Officer for Bristol Hospice in Salt Lake City, UT. Ms. Dove has served in the hospice field for over 25 years. She currently directs the hospice interdisciplinary team's delivery of care, clinical software management, and Quality Assurance Performance Improvement for ten hospice locations in seven states.

Ms. Dove received an AS degree in Nursing, a Bachelor of Applied Science degree in Human Science, and a Masters of Arts degree in Human Science.

Pamela Edwards, RN, CHPN

Pamela Edwards is the Chief Clinical Officer of Agrace HospiceCare in Madison, WI. Ms. Edwards has nearly twenty years of hospice experience serving in various executive and leadership positions. In her current position, she is responsible for leading all facets of clinical operations at her hospice organization.

Ms. Edwards received her BS in Nursing from the University of Virginia.

Lauren Nicholas, PhD

Lauren Nicholas is an Assistant Professor at the Johns Hopkins School of Public Health in Baltimore, MD. Dr. Nicholas has expertise in end-of-life quality metrics, and policy efforts designed to increase use of quality metrics including pay-for-performance and centers of excellence.

Dr. Nicholas received her BS in Policy Analysis and Management from Cornell University, her MPP from The George Washington University, her MPhil in Social Policy and Analysis from Columbia University, and her PhD in Social Policy and Policy Analysis in the field of Health Economics from Columbia University.

Christine Nidd, MSW, PMP, CPHQ

Christine Nidd is the Manager of Quality and Compliance at Hospice of the Northwest in Mount Vernon, WA. Ms. Nidd's education as a Social Worker has given her skills in the areas of psychosocial care and patient/family preferences. Additionally, she has also led numerous Performance Improvement Projects on symptom management.

Ms. Nidd received her Bachelor of Arts in Psychology & Gerontology and her Master of Social Work from the University of Toronto. Additionally, Ms. Nidd received a certificate in Long Term Care Senior Management from the Canadian Healthcare Association, was trained in Lean, and was certified as a Six Sigma Green Belt in Healthcare by Villanova University.

Suzanne Rice, RN, CHPN, CPHQ

Suzanne Rice is the Director of Quality and Service Excellence at Suncoast Hospice/Empath Health in Clearwater, FL. Ms. Rice has over 23 years of hospice experience. In her current position, she maintains an in-depth and up-to-date knowledge of information related to quality reporting for several programs including Hospice, Home Health, PACE and the new Merit Based Incentive Payment Systems (MIPS) for our Palliative Care clinicians.

Ms. Rice completed the Pre-Nursing Program at Filton Technical College in Bristol, UK and graduated as a Registered General Nurse from Southampton University Hospital in the UK.

Heather Thompson, LMSW, CPHQ

Heather Thompson serves as the Hospice and Community Based Services Quality Manager with LHC Group, Inc. in Lafayette, LA. Ms. Thompson has clinical subject matter expertise due to her experience as a Social Worker serving hospice patients in inpatient and home settings. Additionally, Ms. Thompson has worked in hospice quality for the past nine years and she currently works with hospice agencies in various locations, rural and urban, and of varying size.

Ms. Thompson is a Licensed Master Social Worker in the state of Texas.

Alen Voskanian, MD, MBA, FAAHPM, AAHIVS

Alen Voskanian is the Regional Medical Director for VITAS Healthcare in Torrance, CA and an Assistant Clinical Professor of Medicine with the David Geffen School of Medicine, UCLA in Los Angeles, CA. Dr. Voskanian has over ten years of leadership experience in varying health care environments, and he has led multiple interdisciplinary health care projects. Additionally, he serves on the Hospice Leadership Council for the American Academy of Hospice and Palliative Medicine and is an Innovation Advisor to the Center for Medicare and Medicaid Innovation.

Dr. Voskanian received his BA in Molecular & Cell Biology, Neurobiology from the University of California, Berkeley, his MD from the University of California, Irvine, and his MBA with a focus on the Business of Medicine from the Kelley School of Business at Indiana University. Additionally, he completed his residency in Family Medicine at the University of California, Los Angeles, and he is an HIV Fellow and a Healthcare Leadership Fellow.

Patrick White, MD, HMDC, FACP, FAAHPM

Patrick White serves as the Chief Medical Officer for BJC Home Care and is an Assistant Professor of Medicine in the Department of Internal Medicine at Washington University School of Medicine. Dr. White has experience in academic and community hospice programs, a background in comparative effectiveness research, and an interest in public policy and implementation science. Additionally, he has administrative experience from serving as a Chief Medical Officer for two large hospice organizations.

Dr. White received his BS in Biology and Theology from the University of Notre Dame, and his MD from The Ohio State College of Medicine and Public Health. Additionally, he is currently pursuing a PhD in comparative effectiveness and cost-effectiveness research specific to the hospice setting at the University of Pittsburgh. Dr. White completed his residency in internal medicine at Washington University/Barnes-Jewish Hospital and fellowship in palliative care at the University of Pittsburgh Medical Center.