Hospice Quality Reporting Program

Fall 2024 Technical Expert Panel (TEP) Report

Submitted by:

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About This Report

This report summarizes the activities of the Fall 2024 Hospice Quality Reporting Program (HQRP) TEP, which focused on the re-specification of the Hospice Care Index (HCI) and potential future measures for the HQRP.

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Contents

1. Background

1.1 Overview of the Hospice Care Index

The Hospice Care Index (HCI) is a process measure in the Hospice Quality Reporting Program (HQRP). It scores hospices on a 0 to 10 scale using ten claims-based indicators that capture a broad array of information on hospice service provision between admission and discharge. The Centers for Medicare & Medicaid Services (CMS) designed the HCI to address concerns regarding limitations of single-concept, claims-based measures. The ten HCI indicators are calculated entirely from Medicare fee-for-service (FFS) claims and administrative data. The ten indicators depict a comprehensive, holistic view of hospice performance simultaneously captured across multiple dimensions of care provision.

The ten indicators contribute to the total HCI score as follows (Table 1):

- Each hospice receives an individual score (ranging from 0-100%) for each of the ten indicators.
- A hospice's given indicator score relative to national performance determines whether the hospice earns a point for that indicator towards the full index score.
  - Each indicator has a criterion to determine whether a point is earned toward the total index score.
  - For most indicators, hospices scoring in the top 90% of hospice performance nationwide earn a point, and hospices scoring in the bottom 10% of hospice performance do not earn a point. In this sense the HCI seeks to identify bottom-performing "outlier" hospices across multiple domains of hospice care.[1]
- A hospice's overall HCI score is then calculated as the total number of points earned across the ten indicators. The HCI score can range from 0 to 10. Additional details regarding HCI scoring are described in the Hospice Care Index Technical Report.[2]

Table 1. Hospice Care Index Indicator Scoring Criteria

#	Indicator Name	Index Earned Point Criteria
1	Hospice provided continuous home care (CHC) and general inpatient (GIP) service	Hospice Score Above 0%
2	Gaps in nursing visits greater than 7 days	Below 90th Percentile Rank
3	Live discharges in the first 7 days of hospice	Below 90th Percentile Rank
4	Live discharges on or after the 180th day of hospice	Below 90th Percentile Rank
5	Burdensome transitions (type 1): Discharges from hospice followed by hospitalization and hospice readmission	Below 90th Percentile Rank
6	Burdensome transitions (type 2): Discharges from hospice followed by the patient dying in the hospital	Below 90th Percentile Rank

[1] The exception is the indicator for provision of continuous home care/general inpatient care, for which hospices earn a point if they provide any of the services. Note in Table 1 for indicators 2-7, which measure "poor" processes, the earned point criterion is scoring below the 90th percentile rank (since the top 10% represents worse performance). For indicators 8-10, which measure "good" processes, the earned point criterion is scoring above the 10th percentile rank (since the bottom 10% represents worse performance). Focusing on the bottom-performing "outlier" scores is meant to ensure meaningful distinction among hospices.

[2] Abt. *Hospice Care Index Technical Report*. 2022. https://www.cms.gov/files/document/hospice-care-index-hci-technical-reportjuly-2022.pdf

#	Indicator Name	Index Earned Point Criteria
7	Medicare spending per beneficiary	Below 90th Percentile Rank
8	Skilled nursing minutes per routine home care day	Above 10th Percentile Rank
9	Skilled nursing minutes provided on weekends	Above 10th Percentile Rank
10	Skilled nurse and medical social worker visits in the last three days of life	Above 10th Percentile Rank

Since 2022, CMS has publicly reported the HCI scores on the CMS Care Compare website. Consumers can search and compare hospices in their area. Currently, Care Compare lists the total HCI score ranging from 0 to 10 and does not report indicator-level scores.

1.1.1 Exploring HCI Re-Specification

CMS previously submitted the HCI for consensus-based entity (CBE) endorsement in 2021 and again in 2022. It failed endorsement both times, ***in large part due to concerns that there was insufficient evidence to support the validity of the overall index and the individual indicators as measures of hospice quality.*** To address concerns that some HCI indicators may not reflect the quality of hospice care, CMS is exploring re-specification of the HCI with new or revised indicators to assist in achieving CBE endorsement. CMS has expressed interest in a May 2026 Measures Under Consideration (MUC) list submission for a revised HCI, pending input from caregivers and a Technical Expert Panel (TEP) on face validity of individual indicators and a revised index. Table 2 lists descriptions and rationale for each of the existing HCI indicators and potential new indicators.

Table 2. Indicator Descriptions and Rationale

Indicator	Description	Rationale
Existing Indicators		
1. Provision of continuous home care (CHC) and general inpatient service (GIP)	The hospice provided at least one CHC or GIP service day during the reporting period.	Medicare requires hospices to be able to provide both CHC and GIP levels of care, if needed, to manage more intense symptoms.
2. Gaps in skilled nursing visits	The share of hospice stays where the patient experienced at least one gap in nursing visits greater than seven days.	Medicare requires that hospices ensure ongoing assessment of patient and caregiver needs and plan of care implementation.
3. Live discharges in the first seven days of hospice	The share of live discharges from the hospice that occurred within the first seven days of the hospice stay.	High rates of early live discharge may suggest problems in hospices' care processes, their advance care planning to prevent hospitalizations, or their discharge processes.
4. Live discharges on or after the 180th day of hospice	The share of live discharges from the hospice that occurred 180 days or more after hospice election.	High rates of late live discharge raise concerns that some hospices may seek to enroll patients likely to have long stays who may not meet hospice eligibility criteria.

Indicator	Description	Rationale
5. Burdensome transitions (Type 1) - Discharges from hospice followed by hospitalization and hospice readmission	The share of live discharges from the hospice followed by hospital admission within two days, then hospice readmission within two days of hospital discharge.	This pattern of transitions may lead to fragmented care and may be associated with problematic care processes, such as lack of advance care planning to prevent hospitalizations or a discharge process that does not appropriately identify whether hospice patient condition is stable prior to discharge.
6. Burdensome transitions (Type 2) - Discharges from hospice followed by the patient dying in the hospital	The share of live discharges from the hospice followed by a hospitalization within two days of live discharge and death in the hospital.	This transition pattern may be associated with a discharge process that does not appropriately assess the stability of a hospice patient's conditions prior to live discharge.
7. Medicare spending per hospice patient	Total Medicare hospice payments received per beneficiary within a reporting period.	An important determinant of per-beneficiary spending is hospice length of stay. Excessively long patient lengths of stay may indicate that the hospice does not appropriately discharge patients whose medical condition makes them no longer eligible for hospice services, or that hospices selectively enroll patients with longer predicted lengths of stay in hospice. The other determinant of per-beneficiary spending is the level of care at which services are billed. Inappropriate billing of higher-rate services such as general inpatient care may inflate hospice payments.
8. Skilled nursing care minutes per routine home care day	Total minutes of skilled nursing care provided by a hospice on routine home care service days within a reporting period.	Medicare requires hospices to ensure ongoing assessment of patient and caregiver needs and provide education and training as appropriate.
9. Skilled nursing minutes provided during weekends	Total minutes of skilled nursing care provided by the hospice during routine home care service days occurring on Saturdays or Sundays within a reporting period.	Medicare requires that hospice services are routinely available on a 24-hour basis, including weekends.
10. Skilled nurse and medical social worker visits in the last three days of life	The share of hospice decedents who received a visit from a skilled nurse or medical social worker in the last three days of life.	The last several days of life are typically the period in the terminal illness trajectory with the highest symptom burden and increased distress for patients and caregivers. Clinician visits to patients at the end of life are associated with improved outcomes including decreased risk of hospitalization and emergency room visits, decreased odds of dying in the hospital, and decreased distress for patients and caregivers.

Indicator	Description	Rationale
Potential New Indicators		
11. Overall live discharge rate	The share of hospice stays ending in live discharge.	Four of the current HCI indicators (live discharges before 7 and on/after 180 days; burdensome transitions types 1 and 2) capture specific types of live discharge. This indicator would capture all live discharges, for any reason, with a denominator of all hospice stays. CMS has long monitored live discharges with the rationale that a high rate could indicate that a hospice enrolls non-eligible individuals and/or that patients are dissatisfied. Notably, there are instances where live discharge may be warranted, e.g., the patient is no longer terminally ill.
12. Weekend starts of GIP/CHC	The share of CHC/GIP stays started on the weekend.	CMS is concerned about a notable trend of less service on weekends, suggesting patients are less often getting help they need when hospice is supposed to be a 24/7 benefit. The existing HCI indicator on provision of CHC/GIP service tested poorly for validity, therefore we are exploring other indicators of weekend service. Starts of CHC/GIP was an Office of Inspector General (OIG) measure. OIG found that these services, which are intended to be used for symptom crises, are started less often on the weekend, suggesting suffering patients may be waiting until Monday. These crises are relatively rare, so this indicator may need to be combined with others (e.g., weekend minutes of CHC/GIP, ER visits on the weekend, or lack of weekend service in the last days of life).
13. Days in nursing homes or assisted living	The share of hospice patient days in nursing homes or assisted living.	The original version of the HCI, used by CMS to monitor use of the hospice benefit, captured the extent to which service was provided in nursing homes and/or assisted living facilities, with the rationale that a high rate could indicate the hospice seeks out lower-cost, higher-revenue patients (e.g., dementia cases) or that it may signal an unsavory relationship between a hospice and facility.
14. Hospice stays over 180 days	The share of hospice stays that exceed 180 days.	This concept was included in the original version of the Hospice Care Index, with the rationale that hospices may selectively enroll patients likely to have longer stays and lower costs (e.g., dementia cases) and/or patients who do not meet hospice eligibility requirements at the time of enrollment.

Indicator	Description	Rationale
15. Payments for service during beneficiaries' last year of life	The share of hospice payments for services that took place in the last year of beneficiaries' lives.	A lower rate indicates the hospice has a lot of patients with longer stays. This measure was designed by MedPAC and is presented in their March 2017 Report to Congress. MedPAC suggested CMS consider using this measure to capture longer stays, with the rationale that hospices may selectively enroll patients likely to have longer stays and lower costs (e.g., dementia cases) and/or patients who do not meet hospice eligibility requirements at the time of enrollment.
16. Spending on non-hospice services	The share of Medicare spending on non-hospice services for patients enrolled in hospice.	Beneficiaries technically retain Medicare coverage for non-terminal needs when they elect the hospice benefit, but CMS has become concerned with the extent of non-hospice spending. A high rate of non-hospice spending could indicate the hospice is trying to push off care to other parts of Medicare, and/or the hospice is not educating the patient and family to call the hospice for care instead of another provider (like a hospital).
17. Post-mortem visits	The share of patients who expired in hospice whose caregivers received post-mortem visits (i.e., hospice visits on the date of death, after the patient has died).	Bereavement visits have long been viewed as an indicator of good hospice care that CMS should measure and publicly report. Claims capture post-mortem visits (not the same as bereavement visits, but no other data source currently exists).
18. Aide and nurse minutes per routine home care (RHC) day	Total minutes of combined home aide and skilled nursing care provided by a hospice on routine home care service days within a reporting period.	The HCI already includes a measure of skilled nurse minutes per day; home aides are another important aspect of care interaction with the patient and their families.
19. Provision of respite care	The hospice provided at least one inpatient respite care service day during the reporting period.	A unique and important aspect of the hospice philosophy is that non-patient caregivers are included in the scope of care. Medicare allows a patient to receive care in a facility for a short period of time to allow caregivers some respite from care duties.

1.2 Hospice Caregiver Feedback on the HCI

MUC list submissions require input from measure users on face validity, importance, and usefulness of the measure. In September 2024, Abt Global, LLC (under contract with CMS) conducted interviews with experienced hospice caregivers to gather their feedback on the HCI concept overall and each of the ten indicators used to calculate the HCI score. The intent was to inform discussions with the November 2024 TEP regarding potential HCI re-specification.

1.2.1 Interview Procedures

Abt worked with a vendor to recruit individuals who, within the past year, had acted as a caregiver for a family member who had received hospice care in the last month of life. We conducted five one-on-one interviews with these hospice caregivers, including spouses, partners, and adult children of decedents.

Prior to the interview, caregivers reviewed an information sheet on how to search and compare hospice quality information using the CMS Care Compare website. We conducted interviews using Microsoft Teams. We used a semi-structured interview guide and shared slides with a description of each indicator in plain language for interviewees to reference during the interview. Interviews lasted approximately 60 minutes.

1.2.2 Findings

- When asked about the information they relied on to select a hospice for their loved ones, most caregivers indicated that they did not conduct extensive research during such an emotionally challenging time. Instead, they typically chose the hospice recommended by the hospital. Two caregivers specifically prioritized non-profit hospices over for-profit ones, believing that non-profit organizations would offer higher quality care.
- All caregivers agreed that the HCI would have been a valuable resource for choosing a hospice. Said one caregiver:

  "It sounds like a really great resource to have. I do always check things and compare and read reviews, and having that easy way to look and see how they're rated, that is very useful."
- All caregivers expressed a preference to view scores on the individual indicators in addition to the overall HCI score. They felt that more detailed information would be beneficial, particularly because certain indicators might be more important to them than others. Explained one caregiver:

  "If I was choosing [a hospice that scored] between seven and ten, I'd probably want to go in and see what they're better in and what they're less in to see if the things that are dragging them down are things that matter to me. […] So, I think [the HCI score is] good as an initial first pass, but I'd say at some point you need to look into the individual items."
- Caregivers had varied opinions about the HCI indicators and generally had difficulty understanding what the indicators were measuring. Most caregivers struggled to understand the indicators related to live discharge and continuous home care/general inpatient care. Indicators related to skilled nursing care and support at the end of life were generally seen as important. All caregivers expressed that Medicare spending was not a meaningful indicator of hospice quality.

1.3 Empirical Performance of the HCI Indicators

Abt evaluated reliability and validity of each of the existing HCI indicators and potential new indicators to describe empirical performance to the TEP. **Reliability** means the measure produces a consistent quality score or ranking of providers in the same situation. **Validity** means that the scores have a meaningful quality interpretation.

- **Reliability**: We calculated the signal-to-noise ratio, a hospice-level metric, to serve as a reliability score. Signal-to-noise ratios are defined as the proportion of variability in measured performance that can be explained by real differences in hospice performance, as opposed to random variation.[3] Reliability scores vary from 0 (all variation is attributable to measurement error) to 1 (all variation is

[3] Adams JL. The reliability of provider profiling: a tutorial. Santa Monica, CA: RAND; 2009. http://www.rand.org/pubs/technical_reports/TR653.html.

attributable to real performance differences). Scores of approximately 0.7 or higher reflect an acceptable level of reliability.[4]

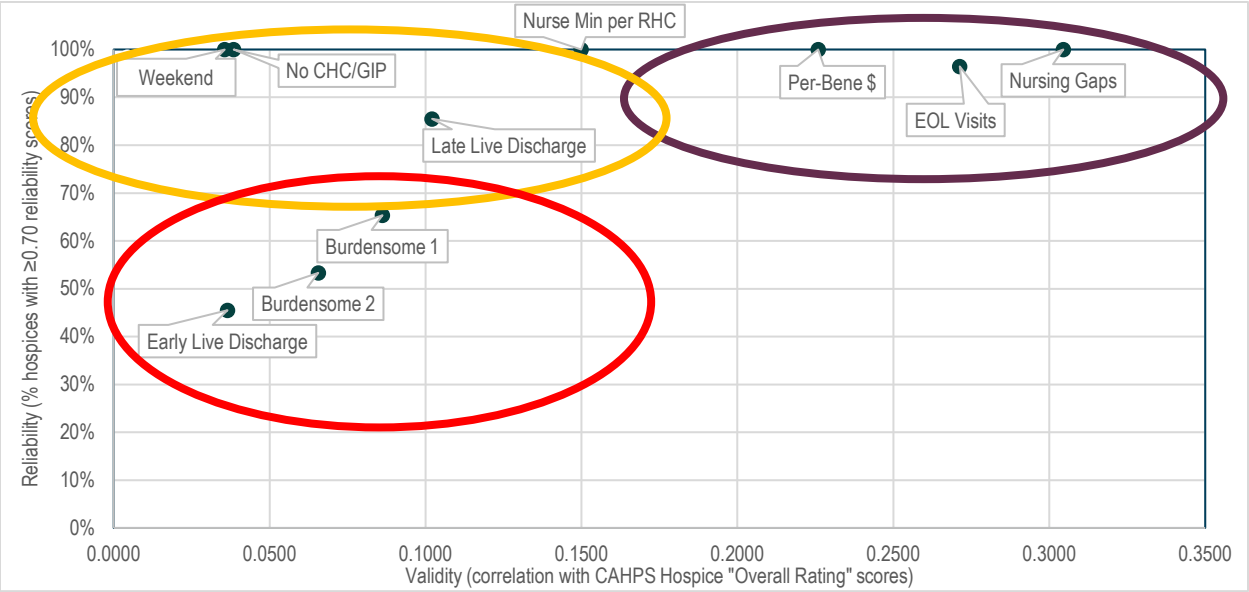
- **Validity:** To assess validity, we calculated Pearson's correlation coefficients for the association between hospice-level indicator scores and responses from the Consumer Assessment of Healthcare Providers and Systems (CAHPS®) Hospice Survey "overall rating" scores. CAHPS Hospice Survey scores are an endorsed quality outcome measure (CBE ID #2651) that capture the caregiver's experiences of a patient's care. In assessing validity, we are looking for concordance between HCI indicator and CAHPS Hospice scores. Higher CAHPS Hospice scores indicate better quality hospices, and therefore positive correlations between CAHPS and indicator scores suggest that the indicator captures an important quality aspect of care because it produces similar hospice quality rankings. We expect the HCI indicators to have modest correlations with CAHPS Hospice scores, as they do not capture identical constructs.

Figure 1 shows the reliability and validity of the ten existing HCI indicators.

- **Reliability** is reported as the percent of hospices with reliability scores of 0.7 or greater.
  - Example: Reliability of **Indicator A** is 80%. This means 80% of hospices had reliability scores of 0.7 or greater on Indicator A.
- **Validity** is reported as the absolute value of the Pearson's correlation coefficient for correlation with CAHPS Hospice scores.
  - Example: Validity of **Indicator B** is 0.20. This means the absolute value of the Pearson's correlation coefficient for the correlation between Indicator B and CAHPS Hospice Survey "overall rating" scores is 0.20.
- **Indicators circled in green had adequate reliability and validity**:
  - Gaps in nursing visits greater than 7 days
  - Skilled nurse and medical social worker visits in the last three days of life
  - Medicare spending per beneficiary
- **Indicators circled in yellow had adequate reliability but lower validity**:
  - Hospice provided CHC/GIP
  - Skilled nursing minutes provided on weekends
  - Live discharges on or after the 180th day of hospice
  - Nurse minutes per routine home care day
- **Indicators circled in red had poor reliability and validity**:
  - Live discharges in the first 7 days of hospice
  - Burdensome transitions types 1 and 2

[4] Nunnally JC. *Psychometric Theory*. 2nd ed. McGraw-Hill; 1978.

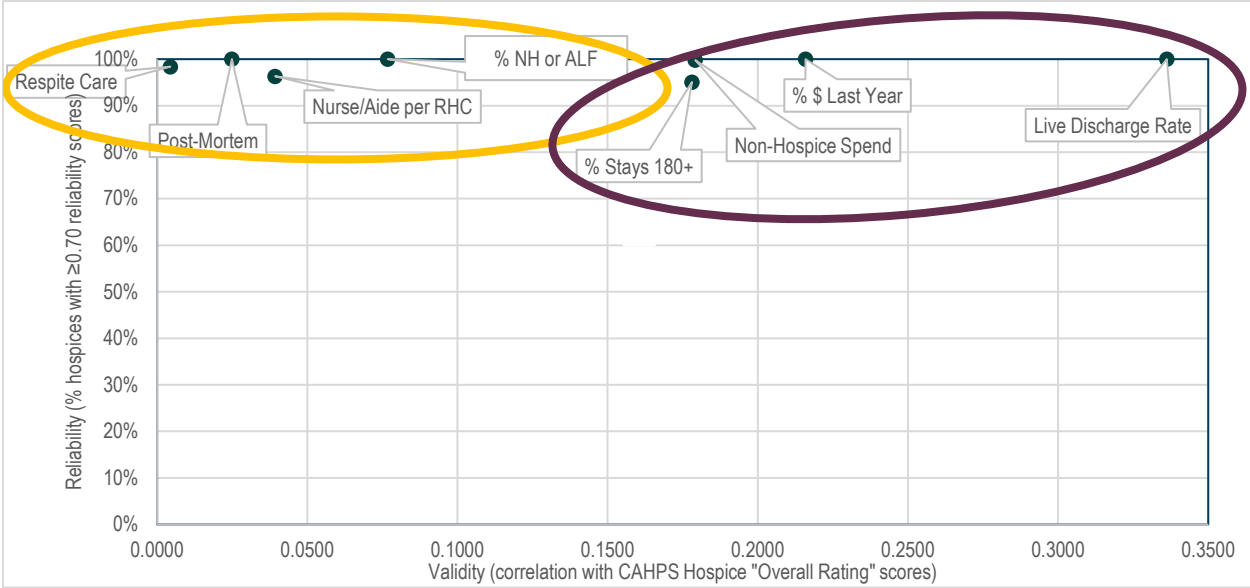
Figure 1. Reliability and Validity of Existing HCI Indicators



Reliability and validity of the potential new HCI indicators are shown in Figure 2.

- **Indicators circled in green had adequate reliability and validity:**
  - Overall live discharge rate
  - Hospice stays over 180 days
  - Payments for service during beneficiaries' last year of life
  - Spending on non-hospice services
- **Indicators circled in yellow had adequate reliability but poor validity:**
  - Days in nursing homes or assisted living facilities
  - Post-mortem visits
  - Aide and nurse minutes per routine home care day
  - Provision of respite care

Figure 2. Reliability and Validity of Potential New HCI Indicators



*Note: The Weekend starts of GIP/CHC was not evaluated empirically but still discussed with the TEP as a potential future concept.

2. Fall 2024 TEP Webinar

2.1 Meeting Purpose

The Fall 2024 TEP webinar focused on receiving input towards a possible re-specification of the HCI and discussion of potential new measure topics for the HQRP. First, the TEP discussed and rated face validity of the existing HCI indicators and potential new (or alternative) HCI indicators. Next, the TEP voted on which indicators to include in a revised HCI. Lastly, the TEP provided feedback on two potential future HQRP measure topics:

1. Revised Comprehensive Assessment Measure
2. Cognitive Function Changes and End-of-life Delirium

2.2 TEP Composition

The TEP consisted of eight experts in hospice care and quality measurement who also serve on CMS' post-acute care cross setting TEP (Table 3).[5] This group was assembled for a one-time meeting to provide feedback on the HCI and initial thoughts on two potential future HQRP measure topics.

Table 3. TEP Composition

Name, Credentials, Professional Role	**Affiliation**	**Expertise**
Rebecca Cartwright, FACHE Chief Medical Officer	Midlands Regional Rehabilitation Hospital Elgin, SC	IRF, Acute Care, Hospital, HH, Hospice, Rural Practice
Barbara "Barb" Hansen, MA, RN CEO and Executive Director	Oregon Hospice and Palliative Care Association (OHPCA) Marylhurst, Oregon	SNF/NH, HH, Hospice, Rural Practice
Jennifer Kennedy, EdD, MA, BSN, RN, CHC Vice President, Quality and Standards	Community Health Accreditation Partner (CHAP) Arlington, VA	HH, Hospice, Quality Measurement
Sireesha Koppula, MD, MPH, MBA, CPE, CMQ Associate Professor of Nephrology	University of New Mexico Albuquerque, NM	LTCH, IRF, SNF/NH, Acute Care Hospital, HH, Hospice, Quality Measurement
Edward W. Martin, MD, MPH, FACP, FAAHPM Chief Medical Officer	HopeHealth Providence, RI	LTCH, SNF/NH, HH, Hospice

[5] For more details about the post-acute care cross-setting TEP convened in November-December 2023 from which this group was drawn, please refer to the meeting's summary report: https://www.cms.gov/files/document/december-2023-pac-and-hospice-cross-setting-tep-summary-report.pdf.

Janet P. McMillan, DSN, APRN, PMHNP-BC Psychiatric Nurse Practitioner/QAPI Coordinator	Forrest General Home Care and Hospice Hattiesburg, Mississippi	Acute Care Hospital, HH, Hospice, Rural Practice, Quality Measurement, Measurement Developer, Clinical Researcher
Rebecca Montross, MS, GCAS Assistant Vice President	Allied Services Integrated Health Systems Tunkhannock, Pennsylvania	IRF, HH, Hospice, Quality Measurement
Robert J. Rosati, PhD Vice President of Research and Quality	Visiting Nurse Association (VNA) Health Group Holmdel, NJ	HH, Hospice, Quality Measurement, Clinical Researcher

2.3 Discussion Topics

2.3.1 HCI Re-specification

Abt first provided an overview of the HCI and how the measure is scored, shared feedback from hospice caregiver interviews regarding importance and usefulness of the HCI, and reviewed reliability and validity findings for each of the ten existing HCI indicators and nine potential new indicators.

The TEP discussed face validity of each indicator and completed polls to rate face validity of each indicator on a scale of 1 to 9 (1=lowest, 9=highest).

- Numeric scores corresponded with descriptive ratings of **low** (1-3), **uncertain** (4-6), or **high** (7-9).
- For face validity ratings below 7, we asked the TEP to leave a comment to explain their concerns. The TEP then voted on which indicators (existing and/or new) to include in a revised HCI.

2.3.2 Potential Future HQRP Measure Topics

Revised Comprehensive Assessment Measure

Abt discussed with the TEP whether CMS should revise an existing HQRP measure, Comprehensive Assessment at Admission. The existing process measure is based on data from the Hospice Item Set (HIS) and assesses the percentage of hospice patient stays in which patients received all seven of the following care processes, as applicable:

1. Beliefs/Values Addressed (if desired by the patient)
2. Treatment Preferences
3. Pain Screening
4. Pain Assessment
5. Dyspnea Treatment
6. Dyspnea Screening
7. Patients Treated with an Opioid who are Given a Bowel Regimen

Abt noted that hospices will transition from the HIS to the Hospice Outcomes and Patient Evaluation (HOPE) in October 2025, and the HOPE instrument will capture similar care processes at admission, as well as additional care processes assessed during the two HOPE Update Visits (HUVs). Abt asked the TEP whether CMS should develop a revised version of the comprehensive assessment measure that captures

these care processes or others based on data collected from the HOPE instrument. Following this discussion, the TEP completed a poll:

- Do you think that CMS should further develop the *Revised Comprehensive Assessment* (process measure) concept?
  - Yes, No, or Unsure
  - Why?

Cognitive Function Changes and End-of-life Delirium

Abt provided background on CMS' interest in a measure concept focused on cognitive function changes and end-of-life delirium in hospice. End-of-life delirium, also known as terminal delirium, terminal agitation, or terminal restlessness, is a neuropsychiatric condition that commonly occurs in the last weeks of life. Delirium at end of life is typically characterized by disorientation, restlessness, agitation, and hallucinations resulting from physiological changes that occur during the dying process.[6] Delirium is highly prevalent among terminally ill patients, impacting an estimated 42% to 88% of patients in the last weeks of life across palliative care settings.[7] Delirium can be highly distressing for hospice patients and caregivers and is typically managed with comfort measures and medication.[8] CMS is potentially interested in a measure to assess cognitive function changes and ensure recognition of end-of-life delirium in hospice patients, with the goal of ensuring that patients and their caregivers receive adequate support to alleviate distress.

Abt posed the following questions to the TEP:

- Would assessment of cognitive function be valuable for hospice care? For measurement of hospice quality? What would a "good" outcome look like?
- How should cognitive function be reported? Should it be assessed by the nurse like the rest of the HOPE, with input from the patient or caregiver, if applicable?

Following this discussion, the TEP completed a poll:

- Do you think that CMS should further develop a measure concept focused on cognitive function changes and end-of-life delirium among hospice patients?
  - Yes, No, or Unsure
  - Why?

[6] Breitbart, W., & Alici, Y. (2008). Agitation and delirium at the end of life. *JAMA*, *300*(24), 2898-2910.

[7] Watt CL, Momoli F, Ansari MT, et al. The incidence and prevalence of delirium across palliative care settings: A systematic review. Palliative Medicine. 2019;33(8):865-877.

[8] Finucane, A. M., Lugton, J., Kennedy, C., & Spiller, J. A. (2017). The experiences of caregivers of patients with delirium, and their role in its management in palliative care settings: an integrative literature review. Psycho-oncology, 26(3), 291-300.

2.4 Key Takeaways

2.4.1 TEP Feedback on HCI Indicators

Feedback from the TEP on each of the HCI indicators is summarized in Table 4. Face validity ratings and the percentage of TEP members voting to include each indicator in the HCI are reported in Table 5.

The polling occurred after TEP discussions, which may have influenced responses, but the TEP polling results offer meaningful feedback for consideration to modify the HCI measure.

- Five indicators received strong support from the TEP, with face validity ratings of "high" (mean numeric ratings of 7-9) and all TEP members voting to include these indicators in a revised HCI:
  - Gaps in nursing visits greater than seven days
  - Nurse minutes per routine home care day
  - Skilled nursing minutes provided during weekends
  - Skilled nurse and medical social worker visits in the last three days of life
  - Overall live discharge rate (NEW)
- All other indicators received face validity ratings of "uncertain" (mean numeric ratings of 4-6) or "low" (mean numeric ratings of 1-3).
- The TEP overwhelmingly agreed that Medicare spending per beneficiary is not a useful indicator of hospice quality for a consumer-facing measure.
- The TEP favored replacing the existing live discharge indicators with a single indicator of the overall live discharge rate as a percentage of all hospice stays, which they agreed was a better measure of hospice quality and easier for consumers to understand.
  - The TEP raised concerns about three of the four existing live discharge indicators (live discharges in the first seven days of hospice, live discharges on or after the 180th day of hospice, and burdensome transitions type 1 – discharges from hospice followed by hospitalization and hospice readmission), which they felt were susceptible to gaming and not necessarily within hospices' control.
  - Several TEP members expressed support for the existing indicator of burdensome transitions type 2 – discharges from hospice followed by the patient dying in the hospital, commenting that this indicator reflects hospices' ability to care for their sickest patients.
- One additional indicator had tentative support with modifications: the TEP supported an indicator focused on aide minutes per routine home care day but noted the caveat that aide minutes should not be combined with skilled nursing minutes, as the two are not equivalent.

Table 4. TEP Feedback by HCI Indicator

Indicator	TEP Feedback	Illustrative quotes
Existing HCI Indicators		
1. Provision of continuous home care and general inpatient service	• The TEP questioned the value of this indicator as a measure of hospice quality. They felt hospice billing data does not accurately reflect hospices' delivery of CHC and GIP care for the following reasons: – Two TEP members noted that hospices are unable to bill for CHC if they do not meet the minimum threshold of 8 hours in a midnight-to-midnight timeframe, therefore billing data may not accurately reflect hospices' delivery of CHC to manage symptom crises. – Two TEP member noted that some hospice providers avoid transferring patients to GIP care to avoid audits and potential denials of the claim. – One TEP member felt it would be unfair to penalize hospices for transferring patients to another hospice for GIP care, particularly for small hospices with fewer resources.	*"In my experience there are hospice providers out there doing continuous home care. But if they don't meet the billing threshold it's not being recorded on the claim form … unless the logistical piece of how it's being captured is changed, I feel like hospices are getting shortchanged."* *"No good deed goes unpunished. So, if you do provide GIP care, some people have learned, whoa, if your patient somehow is a little more complex and takes more than 7 days, you're going to be audited and reviewed, and a good chance you're going to be denied. So, I think that is a real barrier."* *"If the patient did receive GIP, but received it from another hospice, I mean, I think that's okay ... I think this indicator at times misses what may be very good care, but they've simply transferred them to another hospice that has a freestanding, inpatient unit for GIP care."*

Indicator	TEP Feedback	Illustrative quotes
2. Gaps in skilled nursing visits	• The TEP generally agreed that gaps in nursing visits are a valid indicator of hospice quality, and they agreed that 7 days is an appropriate threshold for gaps in nursing visits. • One TEP member noted that the caveat that nursing visits are more burdensome for some hospices than others; for example, visits are more burdensome for hospices operating in rural areas, while visits may be less burdensome for hospices delivering care to patients in a facility. • When asked if this indicator should account for telehealth in addition to in-person visits, one TEP member responded that while telehealth can be a useful supplementary tool, in-person visits are essential for assessing both the patient and the family's situation.	*"It's great information that I think really reflects upon quality of care. And you know, I talk to providers all the time about how staffing is a quality-of-care indicator. So, I like this one."*

Indicator	TEP Feedback	Illustrative quotes
3. Live discharges in the first seven days of hospice	• The TEP questioned the value of this indicator as a measure of hospice quality. Several TEP members noted that early live discharges may occur for many reasons beyond the hospice's control, such as unplanned hospital admissions and ambivalence about hospice care. • One TEP member suggested this indicator is subject to gaming and may incentivize hospices to avoid discharging patients within the first 7 days of admission. • One TEP member suggested the CAHPS Hospice measures provide better insight into patient experience and satisfaction with the hospice. • Two TEP members noted this indicator could be confusing to the general public, who may interpret high live discharge rates as a sign of successful care.	*"I think this could be very misleading. I think the challenge here for hospice organizations is they will do everything possible to educate the patient and the family about hospice. But then, you know, a circumstance comes up early on, and they call 911, and the patient is back in the hospital, even though that's maybe even not their wish. But family members are involved, and they think that's the best thing to do ... I don't think this says a whole lot about the quality of care that the hospice is delivering. I think it's just a difficult transition point for patients."* *"What I hear from hospice providers is, they say, well, we have to respect their [the patient's] right to choose to revoke their hospice benefit. But if we do that in the first 7 days, it's going to show up on this measure."* *"I think if you're talking about this as a measure for people in the community who don't know very much about hospice, I don't think it's meaningful, and I think it's confusing … If I was outside of the hospice world, I would think, oh, that's great. They have patients who are getting better and leaving hospice."*

Indicator	TEP Feedback	Illustrative quotes
4. Live discharges on or after the 180th day of hospice	• The TEP questioned the value of this indicator as a measure of hospice quality and raised concerns that it would be subject to gaming. • One TEP member expressed concerns that hospices could easily game this metric by timing discharges to occur before 180 days. • One TEP member commented that this indicator is better suited for tracking hospice compliance than measuring hospice quality. • One TEP member commented that a high rate of late live discharges may raise concerns about whether patients are appropriate for hospice care, but the indicator as specified does not account for patients' risk of death.	*"I guess the challenge here is how to pick up the programs that have been in the news. I think they may be savvy enough to say, boy, if we wait to 180 days we better hit, you know, 175. It'd be about the sweet spot to dump all of our patients … I understand what the goal is here, but I'm not sure it's catching the bad actors."* *"I've always had, you know, trouble with some of these indicators, because I know they're a mesh of compliance and quality together. This one, I feel is compliance driven … I don't see that there is quality benefit in this indicator."* *"I think a measure like this only makes sense if you could adjust for the risk of dying, because otherwise you're looking at everyone the same way. And you know, I think, that introduces a layer of complexity. But you know, if you've got low risk patients being discharged, you know, out past 180 days, it does raise a question about whether they were originally appropriate for hospice."*

Indicator	TEP Feedback	Illustrative quotes
5. Burdensome transitions (Type 1) - Discharges from hospice followed by hospitalization and hospice readmission	• The TEP questioned whether hospices should be held accountable for this metric, as patients are often hospitalized for reasons beyond the hospices' control. • Several TEP members noted that despite hospices' efforts to educate patients and families to call the hospice in case of an emergency, families often call 911, resulting in a hospitalization. • One TEP member expressed concerns that this indicator could incentivize hospices not to readmit patients after a hospitalization. • One TEP member commented that this indicator is not useful for a consumer-facing measure, and outdated CMS systems prevent hospices from effectively tracking patients across settings of care.	*"I think this gets into the issue of family members wanting them to go be in the hospital or calling 911, and they get hospitalized, or patients not being sure if they really want to be on hospice. So how hospices might get around this is to not readmit the patient after the hospitalization, you know, to say no, but here's other hospices in the area that could serve you. Just as a way of, you know, getting around it."* *"This is another tough one to control, because when agencies teach patients and family members about what they should do in case of what they think is an emergency, you know, in terms of calling us versus 911, there are so many challenges with this. I don't know if this is really a measure to hold agencies accountable for."*
6. Burdensome transitions (Type 2) - Discharges from hospice followed by the patient dying in the hospital	• The TEP generally agreed that this indicator captures hospices' ability to care for their sickest patients. • One TEP member commented that this pattern of burdensome transitions reflects a failure of hospices to provide care for patients experiencing severe symptoms who require a higher level of care. • Another TEP member agreed and commented that this indicator may reflect failure of the hospice to provide adequate staffing and resources for patient care, though external factors such as patients' living situation and caregiver competence can also influence patient outcomes.	*"I think this really speaks to the hospices that aren't able to provide for their sickest patients. And so these patients, they're in terrible pain crisis. There's refractory nausea, vomiting, dyspnea. The things that occur with many patients near the end of life, but they don't have the continuous care, the GIP care to support that. And so, the patients are discharged from hospice and end up in the hospital, and they're at the end of life. And so, then they die during that hospitalization. So, I think this is a very important indicator."*
7. Medicare spending per hospice patient	• The TEP overwhelmingly agreed that Medicare spending is not a useful measure of hospice quality for consumers. • Several TEP members commented that consumers would not know how to interpret this indicator. One TEP member noted that consumers may associate higher spending with better care.	*"I don't know how a consumer would find this helpful."* *"Consumers do not understand or care about this, in my experience."*

Indicator	TEP Feedback	Illustrative quotes
8. Skilled nursing care minutes per routine home care day	• The TEP generally agreed that skilled nursing care minutes are a valuable, though imperfect, measure of hospice quality. • One TEP member commented that skilled nursing care minutes are an important indicator of hospice quality but raised concerns that this metric cannot be standardized, as patient needs and complexity vary. The same TEP member commented that it would be worthwhile to include ancillary telehealth visits in this indicator. • One TEP member commented that routine hospice nurse visits to patients residing in a facility do not necessarily reflect individualized care. • One TEP member suggested the need for an indicator linking skilled nursing minutes to patient outcomes. • One TEP member noted that rural programs face greater challenges with hospice staffing, as time spent traveling to patients' homes reduces time for skilled nursing care.	*"Hospice means that you're going to do the assessment. But it's more than that. It's talking to people in the house. It's comforting, it's educating them, and that can't be in 15 minutes, right? That can't be in 10 minutes. I don't think there should be a standard time, because it should be individualized per the plan of care and the needs of the patient and the family."* *"I think this measure can be gamed if a nurse is visiting 10 patients who all reside in the same facility … the nurse is at that facility on Thursdays, and every patient who's there on hospice on that hospice program is going to get a visit. It's not individualized. I just think it's ripe for gaming."*
9. Skilled nursing minutes provided during weekends	• The TEP agreed that skilled nursing minutes provided on weekends are an important measure of hospices' capacity to address patient needs on weekends. • Multiple TEP members suggested including telehealth visits in this indicator, including audio-only visits, as not all patients have access to a device or reliable Wi-Fi for video conferencing.	*"Nowhere in health care are the weekends the same as the weekdays… if you're in that bottom 10% that could indicate maybe you have some problems with your weekend staffing."* *"I definitely think you should consider telehealth here, because, you know, many times when you're on call and you're talking to a patient and a family. There may not be a reason to make an in-person visit. You can handle questions or anxiety, or whatever it is, lowering anxiety, directing them to go to the comfort kit. Then take this particular medication. Many times, these things are handled in a telehealth way, so I think there could be benefit by including that in this particular indicator."*

Indicator	TEP Feedback	Illustrative quotes
10. Skilled nurse and medical social worker visits in the last three days of life	• The TEP expressed support for this indicator, noting the importance of hospice staff visits at the end of life. • One TEP member questioned why this indicator was duplicative, yet slightly different, from the existing HQRP measure, *Hospice Visits in the Last Days of Life*. • Two TEP members questioned why the measure did not include other types of clinicians such as LPNs and LVNs. • One TEP member recommended focusing on the last seven days of life, as the last three days of life may be difficult to predict, and hospices should receive credit for the intensive care that often occurs in the last week of life.	*"I'm actually fine with this measure…but I think it would be helpful to have a measure within the last 7 days of life, because it's not always easy to predict the last 3 days, and you know a lot of intensive care can occur in that week, and there should be some credit for what's done."*
Potential New HCI Indicators		
11. Overall live discharge rate	• The TEP expressed support for an indicator of the overall live discharge rate as a percentage of all hospice admissions, which they felt would be easier for consumers to understand. • Two TEP members favored using this indicator to replace the four existing HCI live discharge indicators, noting its simplicity. • One TEP member cautioned that it should be clear to the public that a live discharge is not a favorable outcome.	*"Well, it's certainly simpler to just have overall share of live discharges."* *"I like this one better. I think it's a little clearer. I think … demonstrating this to the public, an indication that a live discharge is not an expected or desirable outcome in most cases would be beneficial."*
12. Weekend starts of GIP/CHC	• The TEP questioned whether this indicator is a useful metric of hospice quality, as the need for weekend/weekday distinction is not clear.	*"I don't really see the point of this. … Hospices get criticized for not providing continuous home care or general inpatient care, so whether it's needed on a weekend or during the week to me doesn't make a difference."*

Indicator	TEP Feedback	Illustrative quotes
13. Days in nursing homes or assisted living	• The TEP understood the rationale for this measure but did not think it was a strong indicator of hospice quality. • One TEP member noted that some hospices are based in nursing homes. • One TEP member noted that hospice referrals from nursing home or assisted living facilities can result from good partnerships.	*"I don't love this one from our own personal experience. We're part of a continuum of care that includes five nursing homes, so therefore, we tend to get a high rate of referrals, and I don't think it speaks to anything unsavory on our part."* *"There are some hospices that pretty much are based in nursing homes, and it's not our hospice or many hospices, but I'm not sure that is a strong indicator of quality."*
14. Hospice stays over 180 days	• The TEP was hesitant to recommend this measure as an indicator of hospice quality. • One TEP member commented that this indicator could be subject to gaming. • One TEP member viewed this indicator as more of a utilization measure that is not necessarily helpful to consumers.	*"I don't see this as a quality measure. I think it's another utilization measure that you might want to hold agencies accountable for … but I don't know if it can really help consumers judge the quality of an agency."*
15. Payments for service during beneficiaries' last year of life	• The TEP had difficulty understanding this indicator and did not recommend it as an indicator of quality as currently described.	*"I wasn't sure I understood the measure and what it was they were looking for."* *"Yeah, I agree with him on this one. I was trying to figure out what this meant."*
16. Spending on non-hospice services	• The TEP generally agreed that this indicator would not be a useful measure of the quality of hospice care as specified. • Two TEP members noted that there are no guardrails or checks in the system that would allow hospices to control non-hospice spending. • One TEP member suggested that a direct measure of spending from claims may be more appropriate.	*"So basically, there's no guardrails in the system to basically in any way allow hospices to control this."* *"I don't think this is really a meaningful measure the way it's defined."*

Indicator	TEP Feedback	Illustrative quotes
17. Post-mortem visits	• The TEP agreed on the importance of bereavement visits as a measure of hospice quality but felt that the post-mortem visits measure as specified did not directly reflect bereavement visits. • The TEP agreed that a direct measure of bereavement visits with a specified timeframe would be of great value as an indicator of hospice quality.	*"I think bereavement services are incredibly important. And I think it's a real differentiator between a high-quality hospice and a hospice that's just sort of providing the minimum ... but I don't think post-mortem visits really measures that."* *"If we want to measure bereavement visits, let's come up with a code that measures bereavement visits."*
18. Aide and nurse minutes per routine home care (RHC) day	• The TEP supported an indicator focused on aide minutes per routine home care day but noted the caveat that aide minutes should not be combined with skilled nursing minutes, as the two are not equivalent. • Two TEP members suggested an alternative measure that reflected all non-nurse provider time, including aides and other disciplines such as chaplains and social workers.	*"I would not mix the aide and the nurse minutes together. I don't think that's a wise way to go."* *"We wouldn't want to say that you can substitute one minute of nurse's time for a minute of aide time and consider that, like, equivalent quality. So you know, sort of the devil's in the details."*
19. Provision of respite care	• The TEP agreed that respite care is important but questioned the usefulness of this measure as an indicator of quality due to the financial and logistical challenges hospices face contracting with Medicare-certified facilities to provide inpatient respite care. • Two TEP members questioned the reporting time frame for this measure and whether it should be scaled with the size of the hospice.	*"I know that hospices, at least in my two states, are having an incredible challenge getting Medicare-certified facilities to contract with them for the inpatient respite level of care."* *"In the [location redacted to maintain anonymity] area a lot of skilled nursing facilities were saying, we'll accept your patient for inpatient respite care, but you have to pay us that rate for two weeks and not just five days, because it's not worth our trouble to just admit a patient for five days…it's just really financially challenging."*

Table 5. Face Validity Ratings and Votes to Include HCI Indicators

Indicator	Descriptive Rating*	Mean (SD) Face Validity Rating (Scale 1-9)	Percent of TEP voting to include in the HCI
Existing Indicators			
1. Provision of continuous home care and general inpatient service	Uncertain	5.8 (2.4)	83%
2. Gaps in skilled nursing visits	High	8.3 (0.8)	100%
3. Live discharges in the first seven days of hospice	Low	3.2 (1.9)	0
4. Live discharges on or after the 180th day of hospice	Uncertain	4.5 (1.9)	0
5. Burdensome transitions (Type 1) - Discharges from hospice followed by hospitalization and hospice readmission	Uncertain	4.8 (1.9)	17%
6. Burdensome transitions (Type 2) - Discharges from hospice followed by the patient dying in the hospital	Uncertain	5.5 (3.0)	33%
7. Medicare spending per hospice patient	Low	1.2 (0.4)	0
8. Skilled nursing care minutes per routine home care day	High	8.2 (1.0)	100%
9. Skilled nursing minutes provided during weekends	High	7.5 (1.9)	100%
10. Skilled nurse and medical social worker visits in the last three days of life	High	7.5 (1.5)	100%
Potential New Indicators			
11. Overall live discharge rate	High	7.0 (1.2)	100%
12. Weekend starts of GIP/CHC	Uncertain	5.6 (2.2)	67%
13. Days in nursing homes or assisted living	Low	3.0 (2.4)	0
14. Hospice stays over 180 days	Uncertain	5.2 (2.1)	50%
15. Payments for service during beneficiaries' last year of life	Low	2.8 (2.1)	0
16. Spending on non-hospice services	Uncertain	5.0 (3.5)	33%
17. Post-mortem visits	Uncertain	4.6 (3.1)	67%
18. Aide and nurse minutes per routine home care (RHC) day	Uncertain	5.8 (2.6)	67%
19. Provision of respite care	Uncertain	6.0 (3.0)	67%

*Face validity was rated on a scale of 1-9 (1=lowest, 9=highest). Numeric face validity scores correspond with descriptive ratings of "low" (1-3), "uncertain" (4-6), or "high" (7-9).

2.4.2 TEP Feedback on Potential Future HQRP Measure Topics

Feedback on a Revised Comprehensive Assessment Measure

- Overall, the TEP was not enthusiastic about a revised comprehensive assessment measure concept. They saw the existing comprehensive assessment measure as an "administrative checkbox" measure that is not useful for discerning hospice quality, and they questioned the value of developing a similar measure based on HOPE.

  "It just seems the Hospice Item Set… it's Lake Wobegon. You know, everybody's a hundred percent. Everybody. And the idea that a hospice nurse went in to do an admission and didn't ask about pain. I mean, it just seems not very helpful."

- The TEP also had mixed opinions on the value of incorporating multiple HOPE time points (i.e., admission and the two HUVs) in a comprehensive assessment measure. One TEP member commented in the poll that assessment at multiple time points is important to inform updates to the plan of care, while another TEP member questioned the need to develop a new measure that assesses hospice care processes at multiple time points.

  "I know for us this is just an administrative checkbox, you know, cross your t's, dot your i's situation… I don't know that just introducing this checklist at multiple time points [for a HOPE-based measure] really does much for quality of care."

- Five TEP members responded to the poll on whether CMS should pursue this measure concept; two voted "yes," two voted "no," and one voted "unsure."

Feedback on Cognitive Function Changes and End-of-life Delirium

- The TEP agreed that management of cognitive changes and delirium at end of life is important, but they were uncertain how to capture this aspect of hospice care in a quality measure.

- Several TEP members commented that all patients in hospice experience a decline in cognitive function as they approach end of life, therefore a measure focused on cognitive changes and end-of-life delirium would not be meaningful unless it could be tied to changes in the care plan.

  "I just don't know how this would measure quality unless you tied it to something. Like if there's cognitive decline, did the plan of care change, you know? Were there changes in visit frequency, or did you put the patient into inpatient respite because the caregiver is exhausted. Dealing with this delirium, you would have to tie it to something because it's expected that the cognitive function will decline."

  "We expect cognition will decline as death approaches. I don't think this is helpful."

- Two TEP members noted that agitation is particularly distressing for families, and they highlighted the importance of caregiver education and support to prepare families for cognitive changes that commonly occur at end of life. However, the TEP did not see the value of routine assessment of cognitive changes in hospice, which they felt would be burdensome to patients and caregivers and unlikely to result in improvements in care. One TEP member commented that delirium is easily recognized but difficult to manage, noting that agitation is a common reason for admission to inpatient care.

  "What's disturbing for families is not that, you know, someone's having trouble remembering what month it is...it's the agitated delirium. I think that is incredibly distressing to patients, to families, and

it's probably one of the more common reasons that patients end up being admitted to GIP if that can't be managed in the home. I'm just not sure what the goal [of routine cognitive assessment] is because agitated delirium usually gets recognized… How burdensome it is to, you know, each time you go in and ask the patient, well, what month is it, what year is it… I'm just wondering about how it will ultimately lead to improved care and improved comfort and quality of life for our patients."

"I think much of this has to do with our ability to educate the family or the caregivers about how to deal with some of these issues, and I'm not sure how you measure that…I think really, our ability to support the family caregivers is a big piece of this."

- Six TEP members responded to the poll on whether CMS should pursue this measure topic; three voted "no" and three voted "unsure."