2024 Pre-Rulemaking Measure Review
Preliminary Assessment

MUC ID	Title
MUC2024-078	Proportion of patients who died from cancer admitted to hospice for less than 3 days
Measure Steward & Developer	**Proposed CMS Programs**
American Society of Clinical Oncology (ASCO)	Hospital Inpatient Quality Reporting Program; Hospital Outpatient Quality Reporting Program

Measure Overview
Rationale: The use of hospice and palliative care services has increased in recent years. However, many patients are enrolled in hospice for only a few days before their death, which limits the benefits they could receive. A retrospective study of over 64,000 cancer patients found that more than 16% of them were enrolled in hospice for the last 3 days of life or less. Unfortunately, the number of patients who are not referred to hospice prior to death remains higher than desired. One study reported that more than 30% of patients were not referred, and only 7% of them had a documented discussion about palliative care. Patients who are enrolled in hospice experience longer survival times and fewer hospital admissions and resource use, including aggressive end-of-life care. These benefits increase the longer patients remain in hospice.
CMS-provided program rationale: CMS is considering adding this measure to the Hospital Inpatient and Outpatient Quality reporting programs. This measure is currently being reported in the Prospective Payment System- (PPS-) Exempt Cancer Hospital (PCH) Quality Reporting Program and can be beneficial in the HIQR/HOQR programs to promote patient acceptance and to assist with end-of-life decisions. While hospice and palliative care services have increased in recent years, many patients are enrolled in hospice for only a few days before their death, which limits the benefits and resources that promote a comfortable and dignified death and provide support for families and friends assisting in the transition.
Description: Proportion of patients who died from cancer admitted to hospice for less than 3 days.
Measure background: Measure currently used in a Medicare program and is being submitted without substantive changes for a new or different program.
Numerator: Patients who died from cancer admitted to hospice for less than 3 days. The patient counts toward the numerator if the patient was admitted to hospice for less than 3 days as defined as (Date of Death – Hospice Enrollment Date)

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Measure Overview

Exclusions: None

Denominator: The number of patients attributed to each hospital for the performance period constitutes the hospital's denominator for this measure. A minimum of 25 patients must be attributed to a hospital facility within the measurement period for the measure to be applied to that facility.

Population (Cohort):
The measure population includes all patients 65+ who died with a cancer diagnosis in the data collection period. The population is determined by the following (in order):

Patients who died in the data collection period

- Patients aged 65 or greater as of the date of death
- Patients continuously enrolled in Medicare Parts A&B during the last 12 months before death
- Patients enrolled in an HMO in the 12 months before death are excluded
- Patients with at least 2 cancer-related IP, OP or Hospice visits during the 6 months before death. A cancer-related visit is defined as any one day with a claim/s that includes a cancer diagnosis listed within the top 3 diagnosis codes for that claim.
- For outpatients, a claims day is any one day with a claim(s) that includes a cancer diagnosis within the top 3 diagnosis codes on the claim. Multiple visits on same day count as one day
- For inpatients, each admission with a cancer diagnosis within the top 3 diagnosis codes on the claim counts as one claims day

Attribution:

- Patients are attributed to the hospital/facility where the majority (> 50%) of all claims (inpatient (IP)+ outpatient (OP) occur.
- Patients without any outpatient visits or inpatient stays in the last 6 months before death are removed
- Patients who have no individual hospital/facility with more than one claim in last 6 months before death are removed

If a patient does not have a total majority of all claims (IP + OP) >0.5 at a single hospital A:

Attribute to hospital with highest # of outpatient claims; if # OP claims tied, Attribute to hospital with highest # of inpatient claims; if #IP claims tied, Attribute to hospital with last IP claim before death

Attributed volume:
For meaningful and reliable measurement, a hospital facility must have at least 25 patients attributed during the measurement period. The measure will not be calculated/reported for hospitals with fewer than 25 attributed patients.

Exclusions: None

Exceptions: None

Measure Overview	
Measure type: Intermediate Outcome	**Measure has multiple scores:** No **Measure is a composite:** No **Measure is digital and/or an eCQM:** No **Measure is a paired or group measure:** No
Level of analysis: Facility	**Data source(s):** Digital-Administrative systems: Claims Data
Care setting(s): Prospective Payment Systems (PPS)-exempt cancer hospital	**Risk adjustment or stratification:** None
CBE endorsement status: Endorsed, CBE ID 0216	**CBE endorsement history:** Endorsed 2022 at the clinician level.
Is measure currently used in CMS programs? Yes, PPS-Exempt Cancer Hospital Quality Reporting (PCHQR) Program (2018-2024)	**Measure addresses statutorily required area?** No

Meaningfulness

Importance	
Type of evidence:	Clinical Guidelines or USPSTF (U.S. Preventive Services Task Force) Guidelines; Peer-Reviewed Systematic Review [Source: Measures Under Consideration (MUC) Entry/Review Information Tool (MERIT) Submission Form]
Importance: This measure addresses the issue of late hospice enrollment among patients, particularly those with terminal illnesses such as cancer. Implementation of this measure can improve the quality and efficiency of end-of-life care by ensuring timely hospice enrollment, increasing awareness of palliative care options, and reducing aggressive end-of-life care. The developer cites studies emphasizing a significant performance gap in the timely referral to hospice care and the provision of palliative care discussions. The studies provide evidence supporting the need to improve early hospice enrollment, increase referrals, and promote proactive conversations about palliative care. During the prior CBE endorsement process in 2022, the committee found the importance of this measure sufficient.	
Rating: Met, Prior CBE Endorsement	

Measure Performance

Table 1 shows deciles (i.e., the data sorted and broken into 10 equal parts) by performance score and reliability based on the information provided for the performance score and calculated reliability for the 11 entities described in the testing submission.

Interpretation: The mean score for the 11 entities described in the testing submission for this measure was 24.3. For this proportion measure, a lower score indicates better quality of care.

Table 1. MUC2023-078 Performance Score Deciles

	Overall	Min	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10	Max
Mean Score (SD)	24.3 (4.4)	31.2	31.2	30.7	25.8	25.3	24.8	24.8	24.4	23.5	22.0	17.7	15.5
Number of Entities	11	1	1	1	1	1	1	1	1	1	1	2	1

Conformance
Measure alignment with conceptual intent: The measure specification is appropriate and aligns with the measure focus (patients who died from cancer admitted to hospice for less than 3 days) among all patients 65+ who died with a cancer diagnosis in the data collection period.
Rating: Met, Prior CBE Endorsement

Feasibility	
eCQM feasibility testing conducted:	No [Source: MERIT Submission Form]
Feasibility: Responses indicate feasibility in data elements and workflows. The developer notes that all data elements are in defined fields in electronic sources and align with United States Core Data for Interoperability (USCDI)/USCDI+ quality standard definitions. No changes to provider workflows are needed for this measure. During the prior CBE endorsement process in 2022, the committee found the feasibility of this measure sufficient.	
Rating: Met, Prior CBE Endorsement	

Validity	
Validity testing:	Empiric Validity and Face Validity [Sources: MERIT Submission Form; Methodology Testing Memo; Methodology Stratification Attachment]
Testing level(s):	Facility
Validity: Face validity testing indicated the measure was valid based on 85% (17 out of 20) of the respondents agreeing that the measure could differentiate between good and poor care provided by accountable entities. The remaining three respondents were unsure about their agreement and cited the lack of risk adjustment for the measure as the reason for their uncertainty. To assess empiric validity, the developer identified four end-of-life (EOL) measures and compared each with specific oncology-related measures (PCHQR measures) that reflect high quality of care in similar domains. Oncology-specific PCHQR measures for comparison: • 30-Day Unplanned Readmissions for Cancer Patients (CMIT ID# 00004-01-C-PCHQR; PCH-36) • Admissions for Patients Receiving Outpatient Chemotherapy (CMIT ID# 00021-01-C-PCHQR; PCH-3031) • Emergency Department (ED) Visits for Patients Receiving Outpatient Chemotherapy (CMIT ID# 00021-01-C-PCHQR; PCH-3031) • Surgical Treatment Complications for Localized Prostate Cancer Measure (CMIT ID# 00714-01-CPCHQR; PCH-37) The developer calculated a correlation coefficient for each measure comparison (results outlined in table 6 of the Methodology Testing Memo). The analysis examined whether higher EOL measure scores, indicating worse performance, were positively or	

Validity
negatively associated with the comparator measures. The two correlations that reached statistical significance were between "PHC-34: Proportion of patients who died from cancer not admitted to hospice" and "PCH-36: 30-day Cancer Readmission". The developer hypothesized a small, positive association between the EOL measure scores and the comparator measures (worse performance correlating with worse outcomes), except for the Surgical Treatment Complications measure, where a negative association was expected. The developer reports that empiric validity testing does not provide strong support for the EOL measures likely due to the small sample of PCH hospitals and the lack of gold-standard comparators. The committee should consider if prior endorsement for the measure is sufficient to "pass" on this criterion, given the lack of significant correlation for the measure with the comparator measures uses to stand in as "gold standard."
Threats to validity: The measure is not risk adjusted or stratified. However, there are recommendations on stratification by cancer type including acute hematology, non-acute hematology, and solid tumor.
Rating: Met, Prior CBE Endorsement

Reliability	
Reliability testing method(s):	Signal-to-Noise [Sources: MERIT Submission Form; Methodology Testing Memo; Methodology Stratification Attachment]
Testing level:	Facility
Reliability discussion: The developer assessed reliability of the measure score using a signal-to-noise approach with a dataset consisting of 9,022 patients across 11 facilities. The reliability scores for the 11 facilities tested ranged from 0.512 to 0.945, with a median reliability of 0.842. The average reliability score was 0.821 with a 95% confidence interval of 0.735 to 0.907, indicating a high level of reliability. Over 80% of the entities have a reliability >0.6, indicating that only 20% of entities may not be able to distinguish good from poor quality care. During the prior CBE endorsement process in 2022, the committee found the reliability of this measure sufficient.	
Additional reliability analyses: For Table 2, Battelle used the performance and reliability data provided and approximated decile averages by interpolation.	
Rating: Met, Prior CBE Endorsement	

Reliability Table

Table 2 shows deciles by performance score and reliability based on the information provided for the performance score and calculated reliability for the 11 entities described in the testing submission. Battelle created this table to provide reviewers with a standardized format to assess reliability.

Interpretation: Over 80% of the entities have a reliability >0.6, indicating that less than 20% of entities may not be able to distinguish good from poor quality care.

Table 2. MUC2023-078 Mean Reliability (by Reliability Decile)

Mean	SD	Min	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10	Max	IQR
0.84	0.19	0.512	0.52	0.57	0.62	0.66	0.71	0.85	0.86	0.88	0.89	0.90	0.945	0.26

Usability	
Usability considered in application:	Yes [Source: MERIT Submission Form]
Usability discussion: The developer notes that no unintended consequences have been identified since the measure's implementation. The measure is currently being used in in the PCHQR Program and is being submitted with the same measure specifications to the Inpatient Quality Reporting (IQR) Program and the Hospital Outpatient Quality Reporting Program.	
Rating: Met, Prior CBE Submission	

External Validity	
Was this measure tested in the same target population as the CMS program?	Yes
External Validity Discussion: The developer tested this in the PPS-exempt cancer hospital setting. The target population of the measure is Medicare fee-for-service patients, which is the same population for both proposed programs: Hospital Inpatient Quality Reporting Program and Hospital Outpatient Quality Reporting Program (Medicare beneficiaries).	
Rating: Met	

Appropriateness of Scale

Similar or related measures in program(s):	The developer did not identify related or competing measures.
Measure appropriateness, equity, and value across target populations/measured entities: The developer's review of Hospital Inpatient Quality Reporting Program and Hospital Outpatient Quality Reporting Program measures did not identify any similar or competing measures, suggesting that this measure would fill a gap within the current programs' measure sets. Regarding equity of this measure's performance and benefit across populations, the developer's literature review and analysis do not provide sufficient information to assess the potential for differential benefit or harm to specific subgroups of participating entities or their	

patient populations. The committee should consider the distribution of benefit and risks/burdens of the measure within the proposed program population.

Time to Value Realization

Plan for near- and long-term impacts after implementation:	Yes, expected outcomes from the measure's implementation include improvement in the quality and efficiency of end-of-life care by ensuring timely hospice enrollment, increasing awareness of palliative care options, and reducing aggressive end-of-life care.
Measure implementation impacts over time: While the measure developer briefly mentions potential outcomes for their measure on patient populations, there may be a need for further examination of near- and long-term impacts of this measure across measured entities and patients after implementation. Questions for the committee to consider: • What are the potential near- and long-term impacts of this measure on measured entities, the proposed programs, and patient populations? • Will benefits and burdens associated with this measure be realized within an appropriate implementation time frame? • How will this measure mature through revisions in future if added to the proposed programs' measure set?	