2024 Pre-Rulemaking Measure Review Preliminary Assessment

MUC ID	Title
MUC2024-068	Proportion of patients who died from cancer receiving chemotherapy in the last 14 days of life
Measure Steward & Developer	**Proposed CMS Programs**
American Society of Clinical Oncology (ASCO)	Hospital Outpatient Quality Reporting Program

Measure Overview
Rationale: CMS recognizes that a greater focus should be given to patients who receive unnecessary treatment at the end of life. These treatments have not been shown to improve outcomes in patients at the end of life and can negatively impact the patient and caregiver experience. Literature suggests that patients continue to receive chemotherapy treatments at the end of life even when it is recognized as unnecessary. Additionally, studies have shown resource utilization costs are significantly higher at the end-of-life period. Curtailing unnecessary treatments at the end of life will help drive down end-of-life resource utilization costs. Thus, with this measure CMS advocates for early integration of palliative care/hospice services for patients with late-stage cancer in order to avoid aggressive measures at the end-of-life. With this measure, CMS hopes providers can evaluate internal processes and make the necessary changes through quality improvement initiatives to ultimately improve a patient's death experience as well as improve patient and caregiver/family satisfaction.
CMS-provided program rationale: CMS advocates for early integration of palliative care/hospice services for patients with late-stage cancer in order to avoid aggressive measures at the end of life. With this measure, CMS hopes providers can evaluate internal processes and make the necessary changes through quality improvement initiatives to ultimately improve a patient's death experience as well as improve patient and caregiver/family satisfaction.
Description: Proportion of patients who died from cancer receiving chemotherapy in the last 14 days of life.
Measure background: The measure is 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 receiving chemotherapy in the last 14 days of life. Chemotherapy is defined by the presence of a HCPCS code for the administration of chemotherapy.

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Measure Overview

Within the last 14 days of life is defined as (Date of Death) – (Date of Last Chemotherapy Administration)

Notes: In these specifications chemotherapy administered in the inpatient setting and oral chemotherapy are not included, however, alternative interpretations of the measure for hospital inpatients could include these utilizations. Complete chemotherapy utilization data requires a 100% SAF carrier file. Use of a less complete file (e.g., 5%) will underreport chemotherapy utilization.

Exclusions: No

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) occurs.
    - 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 Overview	
measure will not be calculated/reported for hospitals with fewer than 25 attributed patients. **Exclusions:** See above **Exceptions:** No	
Measure type: Process	**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:** No
CBE endorsement status: Endorsed; CBE 0210; revisions include changes to the measure title and numerator.	**CBE endorsement history:** Measure 0210 received a re-endorsement in 2022 as a registry measure for assessment of individual clinicians and practices.
Is measure currently used in CMS programs? This measure is currently being used in the Prospective Payment System-Exempt Cancer Hospital Quality Reporting Program, but the measure is undergoing substantive changes.	**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 recent uptick in aggressive cancer care being administered near the end-of-life, which is counter to current palliative care guidance. Specifically, this measure focuses on people who died from cancer that received chemotherapy in the last 14 days of life. The measure seeks to improve the quality and efficiency of palliative care/hospice services by encouraging providers to evaluate processes and respond to quality care initiatives, with a goal of leading to reduced unnecessary resource utilization costs and improved patient and caregiver/family satisfaction. Evidence presented notes the lack of consistent palliative care consultation across patients with advanced diseases. During the prior endorsement process in 2022, the committee found the importance of this measure sufficient.	
Rating: Met, Prior CBE Endorsement	

Measure Performance

Tables 1 and 2 show 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 4.4. For this proportion measure, a lower score indicates better quality of care.

Table 1. MUC2023-068 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)	4.4 (1.0)	5.6	5.6	5.4	5.3	5.1	4.7	4.4	4.2	3.9	3.6	2.9	2.6
Number of Entities	11	1	1	1	1	1	1	1	1	1	1	2	1

Conformance
Measure alignment with conceptual intent: As outlined in the MERIT submission form, this measure's specification is appropriate and aligned with the measure focus (patients who died from cancer receiving chemotherapy in the last 14 days of life) conceptual intent. Numerator and denominator populations are appropriate and exclusions align with clinical evidence.
Rating: Met, Prior CBE Endorsement

Feasibility	
eCQM feasibility testing conducted:	No [Source: MERIT Submission Form]
Feasibility: The submission's discussion and MERIT form responses indicate feasibility in data elements and workflows. The developer reports that all data elements required for the measure are defined in electronic sources and align with United States Core Data for Interoperability (USCDI)/USCDI+ quality standard definitions. The interoperability of these data elements increases feasibility of this measure across multiple EHR systems.	
Rating: Met, Prior CBE Endorsement	

Validity	
Validity testing:	Face Validity and Empiric Validity [Source: MERIT Submission Form, Methodology Memo]
Testing level(s):	Facility
Validity: In face validity testing, out of 20 voting experts, 16 (80%) agreed the cost measure could distinguish good from poor quality care, and four (20%) were undecided, citing the lack of risk adjustment for the measure as the reason for their uncertainty. Developer described empirical validity testing procedures, which were performed at the facility level. The developer identified correlated each of the four end of life (EOL) measures with other measures that target the same (or similar) domain of quality for the same or similar patient populations. The developer indicated data year and fiscal year of use (FY2024). The empiric validity testing does not provide strong support for the EOL measures (Methodology Memo Tables 6 has individual correlations for review). This is likely due to the small sample of PCH hospitals and the lack of gold standard comparators. While we anticipate the oncology-specific PCHQR measures should be more closely correlated with the EOL measures than non-oncology-specific measures (such as hospital acquired infection measures), they still measure different quality domains.	
Threats to validity: The MERIT submission form indicates that this measure does not have risk adjustment or recommend stratification. However, a supplemental attachment does outline potential guidance for stratification by cancer type based on a recommendation by the Alliance of Dedicated Cancer Centers (ADCC).	
Rating: Met, Prior CBE Endorsement	

Reliability	
Reliability testing method(s):	Signal-to-Noise [Source: MERIT Submission Form, Methodology Memo]
Testing level:	Facility
Reliability discussion: The numerator and denominator for this measure are well defined. The developer calculated reliability using Adams signal-to-noise method and using a dataset consisting of 9,022 patients across 11 facilities. The median reliability is 0.609, and the minimum reliability is 0.255.	
Additional reliability analyses: For Table 2, Battelle used the performance and reliability data provided and approximated decile averages by interpolation.	
Rating: Met	

Reliability Tables

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

Interpretation: About 50% of the entities have a reliability >0.6, indicating that 50% of entities may not be able to distinguish good from poor quality care.

Table 2. MUC2023-068 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
0.61	0.09	0.255	0.52	0.54	0.56	0.58	0.60	0.62	0.65	0.68	0.71	0.74	0.858	0.13

Usability	
Usability considered in application:	Yes
Usability discussion: Measure is currently in use (PPS-Exempt Cancer Hospital Quality Reporting [PCHQR] Program [2018-2024]). Developer notes they have not identified any unintended consequences. The measure is closely monitored by the program and steward to prevent any potential unintended consequences.	
Rating: Met	

External Validity	
Was this measure tested in the same target population as the CMS program?	Yes
External validity discussion: The developer tested this measure in PPS-exempt cancer hospital setting with a target population of Medicare fee-for-service patients.	
Rating: Met, Prior CBE Endorsement	

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 measures did not identify any similar or competing measures, suggesting that this measure would fill a gap within the current program measure set. The focus and target population of this measure align with the intent and population of the program. 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:	No
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 after implementation for measured entities. Questions for the committee to consider: • What are the potential near- and long-term impacts of this measure on measured entities, MIPS, 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 the future if added to the CMS program?	