2024 Measure Set Review (MSR): Final Preliminary Assessment

The following information was sourced in June of 2024 from the Centers for Medicare & Medicaid Services Measures Inventory Tool (CMIT), the PQM Submission Tool and Repository (STAR), discussions with CMS program leads, and publicly available CMS datasets (see links below).

I. Measure Information

CMIT ID	Title
00237-02-C-MIPS	Emergency Medicine: Emergency Department Utilization of CT for Minor Blunt Head Trauma for Patients Aged 2 Through 17 Years[1]
Measure Steward	**CMS Program**
American College of Emergency Physicians	Merit-Based Incentive Payment System Program (MIPS)

Measure Overview
Rationale: There is evidence to suggest that the low-dose radiation emitted through the use of some CT scans is associated with a small but cumulative risk of radiation-induced cancer, particularly in children.[2] As over 1.3 million individuals are treated and released from the ED for mild traumatic brain injury annually, it is critical that CT scans only be utilized when clinically appropriate.[3] This is an overuse measure to capture instances in which a pediatric patient is characterized as low risk yet receives a CT.
Description: Percentage of emergency department visits for patients aged 2 through 17 years who presented with a minor blunt head trauma who had a head CT for trauma ordered by an emergency care provider who are classified as low risk according to the Pediatric Emergency Care Applied Research Network prediction rules for traumatic brain injury.
Numerator: Emergency department visits for patients who are classified as low risk according to the PECARN prediction rules for traumatic brain injury.
Denominator: All emergency department visits for patients aged 2 through 17 years who presented with a minor blunt head trauma who had a head CT for trauma ordered by an emergency care provider. **Exclusions:** Patient has documentation of ventricular shunt, brain tumor, or coagulopathy.

Measure type: Process	**Measure is a composite:** No **Measure is digital and/or an eCQM:** Yes (a MIPS CQM is considered a dQM).
Level(s) of analysis/measured entity: Clinician	**Care setting:** Emergency Departments

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[1] Two versions of this measure are under review for MSR. This measure's focus is patients aged 2-17 years.

[2] Frush, D. P., Donnelly, L. F., & Rosen, N. S. (2003). Computed tomography and radiation risks: what pediatric health care providers should know. *Pediatrics*, *112*(4), 951-957.

[3] Melnick, E. R., Szlezak, C. M., Bentley, S. K., Dziura, J. D., Kotlyar, S., & Post, L. A. (2012). CT overuse for mild traumatic brain injury. *The Joint Commission Journal on Quality and Patient Safety*, *38*(11), 483-489.

Risk adjustment and/or stratification: No	**Data source(s):** Claims, Registries[4]
Data collection method: Claims data, Electronic health records[5]	**Reporting frequency:** Visit[6]
All required data are collected as part of clinical workflow: Yes. This is a claims data or registry measure.	**Reporting overlap with similar/related measures:** 00237-01-C-MIPS measure Emergency Medicine: Emergency Department Utilization of CT for Minor Blunt Head Trauma for Patients Aged 18 Years+
Does this measure fill a statutorily required category for the program? No	**Is this measure included in upcoming rulemaking?** No

Measure Status	
Current CBE Endorsement Status: Not Endorsed	**CBE Endorsement History:** None

II.   Measure Performance[7]

00237-02-C-MIPS Performance in MIPS 2020-2022

For this measure, the MSR evaluation and analysis team reviewed the following publicly available datasets at data.cms.gov: PY 2022 Clinician Public Reporting: Overall MIPS Performance and the Quality Payment Program Experience.

Figure 1 is a boxplot that shows the distribution of the performance over the past 3 years (where available). For each performance year, the dots indicate the lower 5th and upper 95th percentiles, and the vertical line is the range between these values (90% of the measure scores are between the dots). The box spans the lower 25th to the upper 75th percentile (50% of the measure scores are within the box). The horizontal line in the box indicates the median score, and the "+" indicates the mean score. This plot can be used to assess overall trends in the score over time.

Interpretation: This plot shows that the median score increased from about 7.5 in 2020 to 10 in 2021, and then decreased to about 8.5 in 2022.

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[4] Note from CMS program lead on MIPS CQMs: Data may be gathered from paper, electronic charts, or collected with the assistance of a third-party intermediary.

[5] Note from CMS program lead: Other data collection methods are available for use with MIPS CQMs depending on clinician/system workflow and who is collecting the data.

[6] Reporting frequency provided by CMS program lead. MIPS only allows reporting of data during the submission period January-March and ongoing reporting by episode, visit, or other defined frequency occurs during that period.

[7] Analyses presented in this PA may differ slightly from those conducted by MIPS program analysts due to variation in analytic methods. Additional resources and information about MIPS scoring and benchmarks are available at Quality Payment Program (QPP) (cms.gov).

Figure 1. Boxplot of Measure Score by Year
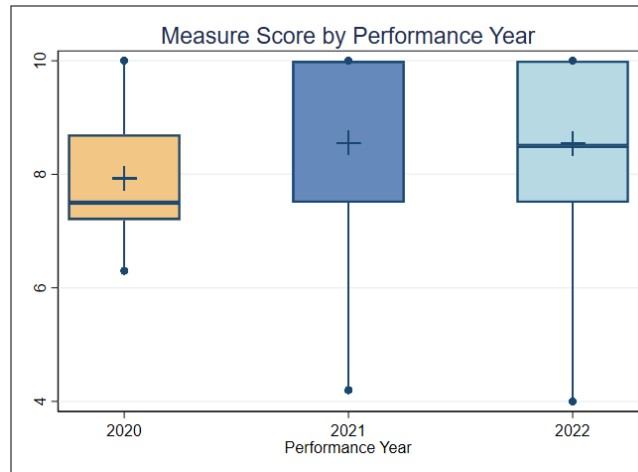
Importance Table

Interpretation of measure scores: Table 1 shows the relative spread of the scores and can also be used to evaluate the impact of improving the score. For example, here, 4 of the 10 entities have an average score of 10. Examining mean scores at the lower deciles show the relative change required to achieve a score of 10. For Decile 6, the score cannot be improved much, but the impact could be significant if the 10% of the entities in Decile 1 were to achieve a score of 10.

Table 1. Importance (Decile by measure score, 2022)

Data Type	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)	8.55 (1.71)	3.00	4.73	7.25	7.52	8.06	8.33	9.57	10	10	10	10	10
Entities	5,183	99	519	518	518	519	518	518	519	518	518	518	2,439