Quality ID #419: Overuse of Imaging for the Evaluation of Primary Headache

2024 COLLECTION TYPE:
MIPS CLINICAL QUALITY MEASURES (CQMS)

MEASURE TYPE:
Process – High Priority

DESCRIPTION:
Percentage of patients for whom imaging of the head (CT or MRI) is obtained for the evaluation of primary headache when clinical indications are not present.

INSTRUCTIONS:
This measure is to be submitted at **each denominator eligible visit** for patients with a diagnosis of primary headache during the performance period. This measure may be submitted by Merit-based Incentive Payment System (MIPS) eligible clinicians who perform the quality actions described in the measure based on the services provided and the measure-specific denominator coding.

NOTE: *Patient encounters for this measure conducted via telehealth (including but not limited to encounters coded with GQ, GT, 95, POS 02, POS 10) are allowable.*

Measure Submission Type:
Measure data may be submitted by individual MIPS eligible clinicians, groups, or third-party intermediaries. The listed denominator criteria are used to identify the intended patient population. The numerator options included in this specification are used to submit the quality actions as allowed by the measure. The quality data codes listed do not need to be submitted by MIPS eligible clinicians, groups, or third-party intermediaries that utilize this modality for submissions; however, these codes may be submitted for those third-party intermediaries that utilize Medicare Part B claims data. For more information regarding Application Programming Interface (API), please refer to the Quality Payment Program (QPP) website.

DENOMINATOR:
All patients seen for evaluation of primary headache

Definition:
Change in headache - A significant change in severity of the headache including changes in location or quality. Other criteria take into account most red flag symptoms and also may reflect change (if a stable primary headache were previously present) but do not reflect a previously tolerated headache that now becomes suddenly disabling in severity. Change also includes any and all new symptoms that may be associated with a headache: arm numbness, speech disturbance, etc.

DENOMINATOR NOTE: **Signifies that this CPT Category I code is a non-covered service under the Medicare Part B Physician Fee Schedule (PFS). These non-covered services should be counted in the denominator population for MIPS CQMs.*

Denominator Criteria (Eligible Cases):
All patients, regardless of age
AND
Diagnosis for Primary Headache (ICD-10-CM): G43.001, G43.009, G43.011, G43.019, G43.101, G43.109, G43.111, G43.119, G43.401, G43.409, G43.411, G43.501, G43.509, G43.511, G43.519, G43.601, G43.609, G43.611, G43.619, G43.701, G43.709, G43.711, G43.719, G43.801, G43.809, G43.811, G43.819, G43.821, G43.829, G43.831, G43.839, G43.901, G43.909, G43.911, G43.919,

G43.E01, G43.E09, G43.E11, G43.E19, G44.019, G44.029, G44.039, G44.1, G44.209, G44.219, G44.221, G44.229, G44.52, G44.59, G44.81, G44.82, G44.89, R51.0, R51.9, G44.009, G44.049, G44.059, G44.099, G44.51, G44.53, G44.83, G44.84, G44.85

AND

Patient encounter during the performance period (CPT): 99202, 99203, 99204, 99205, 99211, 99212, 99213, 99214, 99215, 99242*, 99243*, 99244*, 99245*

AND NOT

DENOMINATOR EXCLUSION:

Patients with clinical indications for imaging of the head:

- Head trauma: G2187
- New or change in headache above 50 years of age: G2188
- Abnormal neurologic exam: G2189
- Headache radiating to the neck: G2190
- Positional headaches: G2191
- Temporal headaches in patients over 55 years of age: G2192
- New onset headache in pre-school children or younger (<6 years of age): G2193
- New onset headache in pediatric patients with disabilities for which headache is a concern as inferred from behavior: G2194
- Occipital headache in children: G2195
- Thunderclap headache: G44.53
- Trigeminal pain: G50.0
- Persistent headaches: G44.52

NUMERATOR:

Patients for whom imaging of the head (Computed Tomography (CT) or Magnetic Resonance Imaging (MRI)) is obtained for the evaluation of primary headache when clinical indications are not present

Numerator Instruction:

INVERSE MEASURE - A lower calculated performance rate for this measure indicates better clinical care or control. The "Performance Not Met" numerator option for this measure is the representation of the better clinical quality or control. Submitting that numerator option will produce a performance rate that trends closer to 0%, as quality increases. For inverse measures, a rate of 100% means all of the denominator eligible patients did not receive the appropriate care or were not in proper control.

Numerator Options:

Performance Met:	Imaging of the head (CT or MRI) was obtained **(M1027)**
OR	
Denominator Exception:	Documentation of patients with primary headache diagnosis and imaging other than CT or MRI obtained **(M1028)**
OR	
Denominator Exception:	Imaging needed as part of a clinical trial; or other clinician ordered the study **(G9537)**
OR	
Performance Not Met:	Imaging of the head (CT or MRI) was NOT obtained, Reason not given **(M1029)**

RATIONALE:

Imaging headache patients absent specific risk factors for structural disease is not likely to change management or improve outcome. Those patients with a significant likelihood of structural disease requiring immediate attention are

detected by clinical screens that have been validated in many settings. Many studies and clinical practice guidelines concur. Also, incidental findings lead to additional medical procedures and expense that do not improve patient well-being.

Overuse of neuroimaging in pediatric patients was reported over a 13-year study period ranging from 41-47% in a study by Graf, et. al. Combining the results of the previous eight studies performed in children with recurrent headaches (7 in clinic-based population, 1 in children referred for neuroimaging), neuroimaging was undertaken in 38.1% of the study populations (1,072/2,815; range 17.5–100%).

You, et al. determined the indications for CT and MRI in Ontario. They studied 11,824 CT and 11,867 MRI scans from a random sample of 40 hospitals in Ontario. Hospital sampling was stratified by region and hospital teaching status. The publication reports that of the 11,824 CT scans completed, 3,930 (33%) were of the head and 1,055 (26.8%) of these were for the indication of headache. Because the CT scans were done for more than one indication the actual proportion of CT scans done solely for the purpose of headache was 16%. Similarly, 4,038 (34%) of all MRI scans were head scans of which 523 (13%) were for the indication of headache. However, similar to CT scans, the MRI scans were requested for multiple indications and the actual proportion of MRI scans done solely for the purpose of headache was estimated to be 4% (Unpublished data, personal communication with author, April 29, 2010).

Information concerning the workup of headache in the ambulatory setting is limited. In actual practice, only about 3% of patients who present with a new headache in the office setting have neuroimaging ordered. When neuroimaging is performed, about 4% of CT scans find a significant and treatable lesion (in one sample of 293 CT scans, there were 12 true-positive scans and 2 false-positive scans). Expert guidelines regarding headaches among ambulatory patients recommend neuroimaging for migraine patients only in the presence of persistent focal abnormal neurological findings.

Opportunity for Improvement:
There is a marked need to reduce the unnecessary use of neuroimaging for atraumatic primary headache disorders. This measure is intended to reduce the use of these unnecessary tests, reduce treatment costs, and improve patient safety by reducing the exposure to unnecessary radiation and testing.

CLINICAL RECOMMENDATION STATEMENTS:

Neuroimaging recurrent headache: Obtaining a neuroimaging study on a routine basis is not indicated in children with recurrent headaches and a normal neurologic examination. (Level B)

Neuroimaging is not usually warranted for patients with migraine and normal neurological examination. (Level B)

Neuroimaging is not indicated in patients with a clear history of migraine, without red flag features for potential secondary headache, and a normal neurological examination. (Level D)* Only included because it supports neuroimaging overuse in normal exam patients with migraine. But low level evidence. *deemed by guideline group to be one of the most clinically important recommendations.

Do not refer people diagnosed with TTH, migraine, CH or medication overuse headache (MOH) for neuroimaging solely for reassurance.

In adult and pediatric patients with migraine, with no recent change in pattern, no history of seizures, and no other focal neurological signs or symptoms, the routine use of neuroimaging is not warranted. (Grade B)

Don't do imaging for uncomplicated headache.

The US Headache Consortium identified three consensus-based (not evidence-based) general principles of management for making decisions regarding neuroimaging in patients with headache: 1) testing should be avoided if it will not lead to a change in management; 2) testing is not recommended if the patient is not significantly more likely than anyone else in the general population to have a significant abnormality; and 3) testing that normally may not be recommended as a population policy may make sense at an individual level, resources notwithstanding.

Scottish Intercollegiate Guidelines Network – Diagnosis and management of headache in adults:

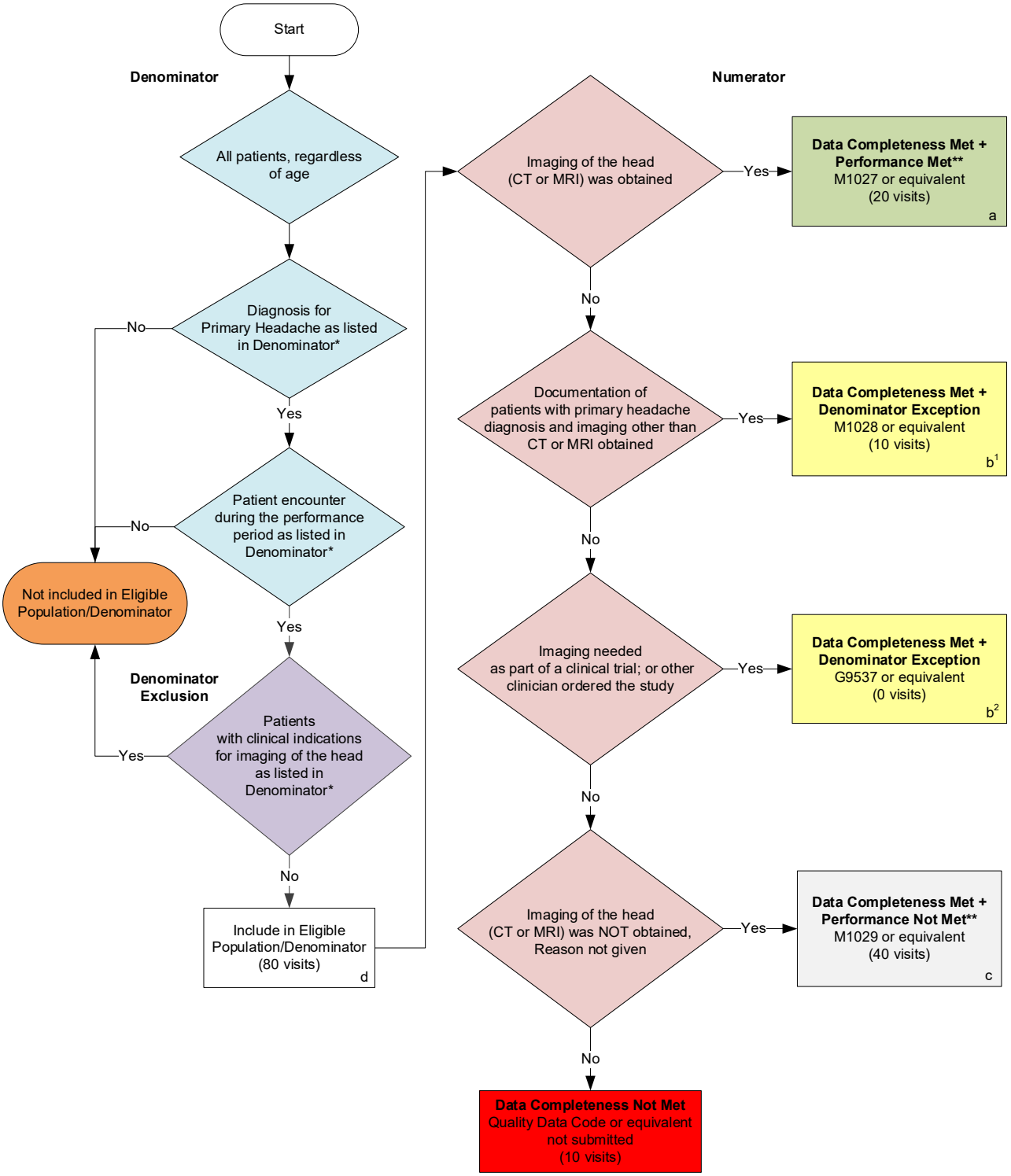
- Neuroimaging is not indicated in patients with a clear history of migraine, without red flag features for potential secondary headache, and a normal neurological examination.
- Clinicians requesting neuroimaging should be aware that both MRI and CT can identify incidental neurological abnormalities which may result in patient anxiety as well as practical and ethical dilemmas with regard to management.
- Brain CT should be performed in patients with headache who have unexplained abnormal neurological signs, unless the clinical history suggests MRI is indicated.

Institute for Clinical Systems Improvement – Diagnosis and Treatment of Headache:

- Clinicians should use a detailed headache history that includes duration of attacks and the exclusion of secondary causes as the principal means to diagnose primary headache. Additional testing in patients without atypical symptoms or an abnormal neurologic examination is unlikely to be helpful. There are, as yet, no tests that confirm the diagnosis of primary headache. The diagnosis of primary headache is dependent on the clinician. The work group recommends careful consideration before proceeding with neuroimaging (CT or MRI).

2024 Clinical Quality Measure Flow for Quality ID #419: Overuse of Imaging for the Evaluation of Primary Headache

Disclaimer: *Refer to the measure specification for specific coding and instructions to submit this measure.*



SAMPLE CALCULATIONS

Data Completeness=

Performance Met (a=20 visits) + Denominator Exceptions (b^1+b^2=10 visits) + Performance Not Met (c=40 visits) = 70 visits = **87.50%**

Eligible Population / Denominator (d=80 visits) = 80 visits

Performance Rate=**

Performance Met (a=20 visits) = 20 visits = **33.33%**

Data Completeness Numerator (70 visits) – Denominator Exceptions (b^1+b^2=10 visits) = 60 visits

*See the posted measure specification for specific coding and instructions to submit this measure.

**A lower calculated performance rate for this measure indicates better clinical care or control

NOTE: Submission Frequency: Visit

v8

2024 Clinical Quality Measure Flow Narrative for Quality ID #419: Overuse of Imaging for the Evaluation of Primary Headache

***Disclaimer**: Refer to the measure specification for specific coding and instructions to submit this measure.*

1. Start with Denominator
2. *All patients, regardless of age*
3. Check *Diagnosis for Primary Headache as listed in Denominator**:
    a. If *Diagnosis for Primary Headache as listed in Denominator** equals No, do not include in *Eligible Population/Denominator*. Stop processing.
    b. If *Diagnosis for Primary Headache as listed in Denominator** equals Yes, proceed to check *Patient encounter during the performance period as listed in Denominator**.
4. Check *Patient encounter during the performance period as listed in Denominator**:
    a. If *Patient encounter during the performance period as listed in Denominator** equals No, do not include in *Eligible Population/Denominator*. Stop processing.
    b. If *Patient encounter during the performance period as listed in Denominator** equals Yes, proceed to check *Patients with clinical indications for imaging of the head as listed in Denominator**.
5. Check *Patients with clinical indications for imaging of the head as listed in Denominator**:
    a. If *Patients with clinical indications for imaging of the head as listed in Denominator** equals Yes, do not include in *Eligible Population/Denominator*. Stop processing.
    b. If *Patients with clinical indications for imaging of the head as listed in Denominator** equals No, include in *Eligible Population/Denominator*.
6. Denominator Population:
    - Denominator Population is all Eligible Visits in the Denominator. Denominator is represented as Denominator in the Sample Calculation listed at the end of this document. Letter d equals 80 visits in the Sample Calculation.
7. Start Numerator
8. Check *Imaging of the head (CT or MRI) was obtained*:
    a. If *Imaging of the head (CT or MRI) was obtained* equals Yes, include in *Data Completeness Met and Performance Met*.
        - *Data Completeness Met and Performance Met* letter is represented in the Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter a equals 20 visits in the Sample Calculation.
    b. If *Imaging of the head (CT or MRI) was obtained* equals No, proceed to check *Documentation of patients with primary headache diagnosis and imaging other than CT or MRI obtained*.
9. Check *Documentation of patients with primary headache diagnosis and imaging other than CT or MRI obtained*:

a. If *Documentation of patients with primary headache diagnosis and imaging other than CT or MRI obtained* equals Yes, include in *Data Completeness Met and Denominator Exception*.

- *Data Completeness Met and Denominator Exception* letter is represented in the Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter b^1 equals 10 visits in the Sample Calculation.

b. If *Documentation of patients with primary headache diagnosis and imaging other than CT or MRI obtained* equals No, proceed to check *Imaging needed as part of a clinical trial; or other clinician ordered the study*.

10. Check *Imaging needed as part of a clinical trial; or other clinician ordered the study*:

a. If *Imaging needed as part of a clinical trial; or other clinician ordered the study* equals Yes, include in *Data Completeness Met and Denominator Exception*.

- *Data Completeness and Denominator Exception* is represented in the Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter b^2 equals 0 visits in the Sample Calculation.

b. If *Imaging needed as part of a clinical trial; or other clinician ordered the study* equals No, proceed to check *Imaging of the head (CT or MRI) was NOT obtained, Reason not given*.

11. Check *Imaging of the head (CT or MRI) was NOT obtained, Reason not given*:

a. If *Imaging of the head (CT or MRI) was NOT obtained, Reason not given* equals Yes, include in *Data Completeness Met and Performance Not Met*.

- *Data Completeness Met and Performance Not Met* letter is represented in the Data Completeness in the Sample Calculation listed at the end of this document. Letter c equals 40 visits in the Sample Calculation.

b. If *Imaging of the head (CT or MRI) was NOT obtained, Reason not given* equals No, proceed to check *Data Completeness Not Met*.

12. Check *Data Completeness Not Met*:

- If *Data Completeness Not Met*, the Quality Data Code or equivalent was not submitted. 10 visits have been subtracted from the Data Completeness Numerator in the Sample Calculation.

Sample Calculations

Data Completeness equals Performance Met (a equals 20 visits) plus Denominator Exceptions (b^1 plus b^2 equals 10 visits) plus Performance Not Met (c equals 40 visits) divided by Eligible Population/Denominator (d equals 80 visits). All equals 70 visits divided by 80 visits. All equals 87.50 percent.

Performance Rate equals Performance Met (a equals 20 visits) divided by Data Completeness Numerator (70 visits) minus Denominator Exceptions (b^1 plus b^2 equals 10 visits). All equals 20 visits divided by 60 visits. All equals 33.33 percent.

*See the posted measure specification for specific coding and instructions to submit this measure.

**A lower calculated performance rate for this measure indicates better clinical care or control.

NOTE: Submission Frequency: Visit

The measure diagrams were developed by CMS as a supplemental resource to be used in conjunction with the measure specifications. They should not be used alone or as a substitution for the measure specification.