Quality ID #415: Emergency Medicine: Emergency Department Utilization of CT for Minor Blunt Head Trauma for Patients Aged 18 Years and Older

2026 COLLECTION TYPE:
MERIT-BASED INCENTIVE PAYMENT SYSTEM (MIPS) CLINICAL QUALITY MEASURE (CQM)

MEASURE TYPE:
Efficiency – High Priority

DESCRIPTION:
Percentage of emergency department visits for patients aged 18 years and older who presented with a minor blunt head trauma who had a head CT for trauma ordered by an emergency care provider who have an indication for a head CT.

INSTRUCTIONS:

Reporting Frequency:
This measure is to be submitted for each denominator eligible visit for denominator eligible case as defined in the denominator criteria.

Intent and Clinical Applicability:
The intent of this measure is to assess the appropriate use of head CT for patients aged 18 years and older who present to the emergency department with a minor blunt head trauma. This measure may be submitted by Merit-based Incentive Payment System (MIPS) eligible clinicians who perform the quality actions as defined by the numerator based on the services provided and the measure-specific denominator coding.

Measure Strata and Performance Rates:
This measure contains one strata defined by a single submission criteria.
This measure produces a single performance rate.

Implementation Considerations:
For the purposes of MIPS implementation of this measure, this visit measure is submitted each time a patient is seen by the individual MIPS eligible clinician during the performance period.

Telehealth:
NOT TELEHEALTH ELIGIBLE: This measure is not appropriate for nor applicable to the telehealth setting. Patient encounters for this measure conducted via telehealth should be removed from the denominator eligible patient population. Therefore, if the patient meets all denominator criteria but the encounter is conducted via telehealth, it would be appropriate to remove them from the denominator eligible patient population. Telehealth eligibility is at the measure level for inclusion within the denominator eligible patient population and based on the measure specification definitions which are independent of changes to coding and/or billing practices.

Measure Submission:
The quality data codes listed do not need to be submitted by MIPS eligible clinicians, groups, or third party intermediaries that utilize this collection type for submissions; however, these codes may be submitted for those third party intermediaries that utilize Medicare Part B claims data. The coding provided to identify the measure criteria: Denominator or Numerator, may be an example of coding that could be used to identify patients that meet the intent of this clinical topic. When implementing this measure, please refer to the 'Reference Coding' section to determine if other codes or code languages that meet the intent of the criteria may also be used within the medical record to identify and/or assess patients. For more information regarding Application Programming Interface (API), please refer to the Quality Payment Program (QPP) website.

DENOMINATOR:
All emergency department visits for patients aged 18 years and older who presented with a minor blunt head trauma who had a head CT for trauma ordered by an emergency care provider*.

Definitions:
Minor Blunt Head Trauma – Includes only non-penetrating injuries.

*DENOMINATOR NOTE: *This measure looks to determine if an emergency care provider ordered head CT services typically provided under CPT code 70450.*

Denominator Criteria (Eligible Cases):
Patients aged ≥ 18 years on date of encounter
AND
Diagnosis for minor blunt head trauma (ICD-10-CM): S00.03XA, S00.33XA, S00.431A, S00.432A, S00.439A, S00.531A, S00.532A, S00.83XA, S00.93XA, S06.A0XA, S06.A1XA, S06.0XAA, S06.0X0A, S06.0X1A, S06.0X9A, S06.1XAA, S06.1X0A, S06.1X1A, S06.1X2A, S06.1X3A, S06.1X4A, S06.1X9A, S06.2XAA, S06.2X0A, S06.2X1A, S06.2X2A, S06.2X3A, S06.2X4A, S06.2X9A, S06.30AA, S06.300A, S06.301A, S06.302A, S06.303A, S06.304A, S06.309A, S06.31AA, S06.32AA, S06.33AA, S06.34AA, S06.340A, S06.341A, S06.342A, S06.343A, S06.344A, S06.349A, S06.35AA, S06.350A, S06.351A, S06.352A, S06.353A, S06.354A, S06.359A, S06.36AA, S06.360A, S06.361A, S06.362A, S06.363A, S06.364A, S06.369A, S06.37AA, S06.38AA, S06.4XAA, S06.4X0A, S06.4X1A, S06.4X2A, S06.4X3A, S06.4X4A, S06.4X9A, S06.5XAA, S06.5X0A, S06.5X1A, S06.5X2A, S06.5X3A, S06.5X4A, S06.5X9A, S06.6XAA, S06.6X0A, S06.6X1A, S06.6X2A, S06.6X3A, S06.6X4A, S06.6X9A, S06.81AA, S06.810A, S06.811A, S06.812A, S06.813A, S06.814A, S06.819A, S06.82AA, S06.820A, S06.821A, S06.822A, S06.823A, S06.824A, S06.829A, S06.89AA, S06.890A, S06.891A, S06.892A, S06.893A, S06.894A, S06.899A, S06.9XAA, S06.9X0A, S06.9X1A, S06.9X2A, S06.9X3A, S06.9X4A, S06.9X9A, S09.11XA, S09.19XA, S09.8XXA
AND
Patient encounter during the performance period (CPT): 99281, 99282, 99283, 99284, 99285, 99291
WITHOUT
Encounters conducted via telehealth: M1426
AND
Patient presented with a minor blunt head trauma and had a head CT ordered for trauma by an emergency care provider: G9530
AND NOT
DENOMINATOR EXCLUSION:
Patient has documentation of ventricular shunt, brain tumor, multisystem trauma, or is currently taking an antiplatelet medication including: abciximab, anagrelide, cangrelor, cilostazol, clopidogrel, dipyridamole, eptifibatide, prasugrel, ticlopidine, ticagrelor, tirofiban, or vorapaxar: G9531

NUMERATOR:
Emergency department visits for patients who have an indication for a head CT.

Definitions:
Indications for a head CT in patients presenting to the emergency department for minor blunt head trauma:
Patients with no loss of consciousness (LOC) AND no post-traumatic amnesia AND any one of the following:

- GCS score less than 15
- Severe headache
- Vomiting
- Age 65 years and older
- Physical signs of a basilar skull fracture (signs include haemotympanum, "raccoon" eyes, cerebrospinal fluid leakage from the ear or nose, Battle's sign)

- Focal neurological deficit
- Coagulopathy
- Thrombocytopenia
- Currently taking any of the following anticoagulant medications**: apixaban, argatroban, betrixaban, bivalirudin, dabigatran, dalteparin, desirudin, edoxaban, enoxaparin, fondaparinux, heparin, rivaroxaban, warfarin
- Dangerous mechanism of injury (i.e., ejection from a motor vehicle, a pedestrian struck, and a fall from a height of more than 3 feet or 5 stairs)

OR

Patients with either LOC OR posttraumatic amnesia AND any one of the following:

- GCS score less than 15
- Headache
- Age 60 years and older, and less than 65 years
- Drug/alcohol intoxication
- Short-term memory deficits
- Evidence of trauma above the clavicles (physical location, any trauma to the head or neck [i.e., laceration, abrasion, bruising, ecchymosis, hematoma, swelling, fracture])
- Posttraumatic seizure

Anticoagulant medications – **The aforementioned list of medications/drug names is based on clinical guidelines and other evidence and may not be all-inclusive or current. Physicians and other health care professionals should refer to the FDA's web site page entitled "Drug Safety Communications" for up-to-date drug recall and alert information when prescribing medications. As part of the measure maintenance process, the measure and specifications will be updated routinely to account for newly released and FDA approved pharmacologic agents.

Numerator Options:

Performance Met:	Patient with minor blunt head trauma had an appropriate indication(s) for a head CT (G9529)

OR

Performance Not Met:	Patient with minor blunt head trauma did not have an appropriate indication(s) for a head CT (G9533)

RATIONALE:

Though it is difficult to directly attribute the effects of smaller dosages of radiation, such as that received through computed tomography (CT), the dosage of radiation from CTs has increased in recent years, in part due to the increased speed of image acquisition. Additionally, there is evidence to suggest that the radiation doses from CTs are higher and more variable than generally quoted. Further, as “radiation doses associated with commonly used CT examinations resemble doses received by individuals in whom an increased risk of cancer was documented,” the use of some CT scans is associated with a “nonnegligible” lifetime attributable risk of cancer. 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. Through measurement of the share of CT scans that are performed inappropriately, a focus can be brought to quality improvement and increased application of clinical decision tools around this topic.

CLINICAL RECOMMENDATION STATEMENTS:

The following evidence statements are quoted verbatim from the referenced clinical guidelines and other references:

A noncontrast head CT is indicated in head trauma patients with loss of consciousness or posttraumatic amnesia only if one or more of the following is present: headache, vomiting, age greater than 60 years, drug or alcohol intoxication, deficits in short-term memory, physical evidence of trauma above the clavicle, posttraumatic seizure, GCS score less than 15, focal neurologic deficit, or coagulopathy. (Level A recommendation) (American College of Emergency Physicians (ACEP), 2008).

A noncontrast head CT should be considered in head trauma patients with no loss of consciousness or posttraumatic amnesia if there is a focal neurologic deficit, vomiting, severe headache, age 65 years or greater, physical signs of a basilar skull fracture, GCS score less than 15, coagulopathy, or a dangerous mechanism of injury. [Dangerous mechanism of injury includes ejection from a motor vehicle, a pedestrian struck, and a fall from a height of more than 3 feet or 5 stairs.] (Level B recommendation) (American College of Emergency Physicians (ACEP), 2008)
Based on the recommendations, patients age ≥ 65 are always considered high risk according to the Canadian CT head injury rule. The New Orleans Rule, on the other hand, uses an age cutoff of 60. It categorizes patients aged 60+ as high risk under certain circumstances (LOC or amnesia/disorientation). This leads to a situation where patients age 60-64 are categorized differently because of idiosyncrasies in how the Canadian and New Orleans studies were designed, and the measure appropriately incorporates these rules into its design.

REFERENCES:

American College of Emergency Physicians (ACEP). (2008). Clinical Policy: Neuroimaging and Decisionmaking in Adult Mild. *Annals of Emergency Medicine*, 714 - 748.

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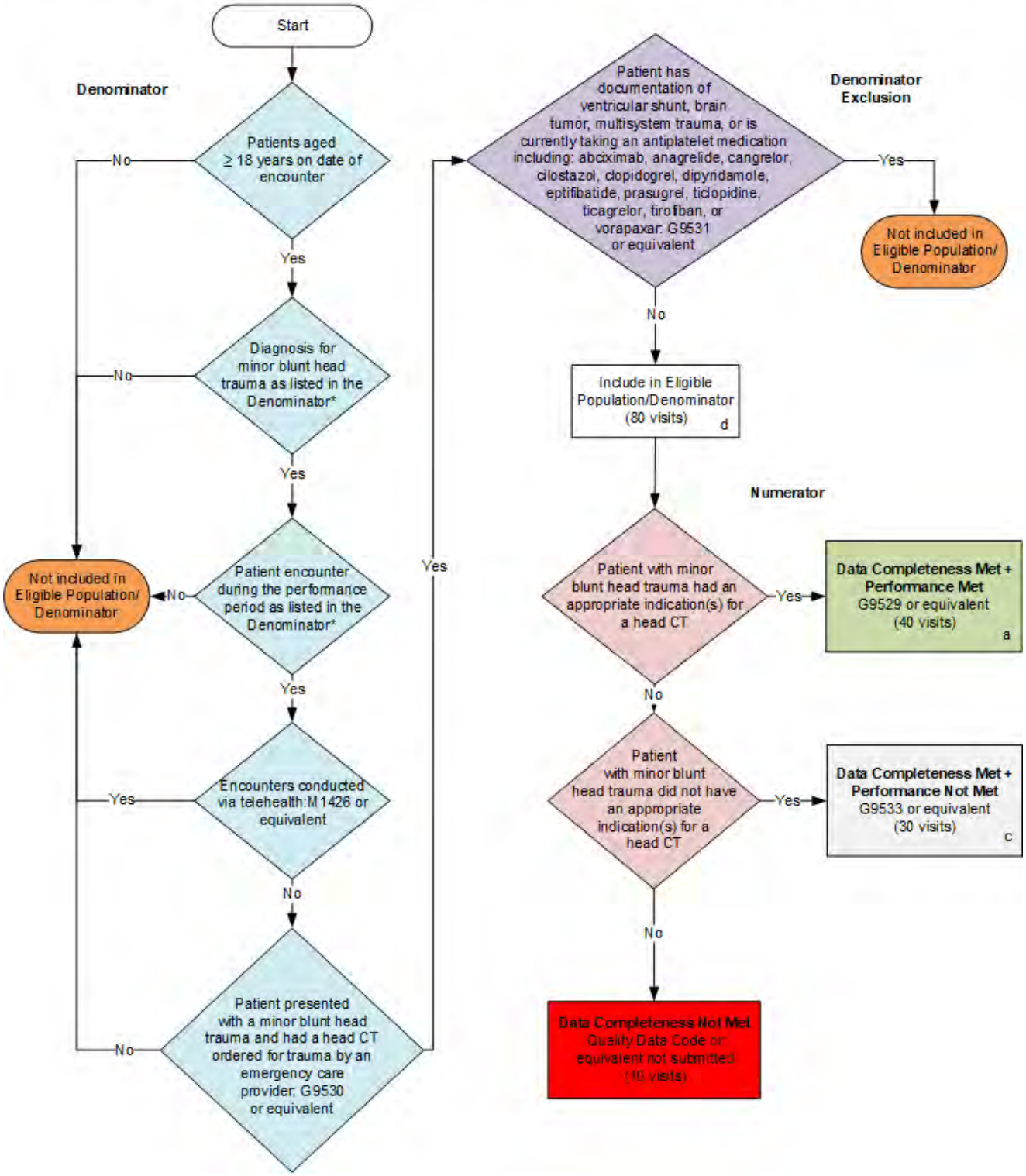
2026 Clinical Quality Measure Flow for Quality ID #415: Emergency Medicine: Emergency Department Utilization of CT for Minor Blunt Head Trauma for Patients Aged 18 Years and Older

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



SAMPLE CALCULATIONS

Data Completeness=

Performance Met (a=40 visits) + Performance Not Met (c=30 visits) = 70 visits = **87.50%**

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

Performance Rate=

Performance Met (a=40 visits) = 40 visits = **57.14%**

Data Completeness Numerator (70 visits) = 70 visits

*See the posted measure specification for specific coding and instructions to submit this measure.
NOTE: Submission Frequency: Visit

v10

2026 Clinical Quality Measure Flow Narrative for Quality ID #415: Emergency Medicine: Emergency Department Utilization of CT for Minor Blunt Head Trauma for Patients Aged 18 Years and Older

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

1. Start with Denominator
2. Check *Patients aged greater than or equal to 18 years on the date of the encounter.*
    a. If *Patients aged greater than or equal to 18 years on the date of the encounter* equals No, do not include in *Eligible Population/Denominator*. Stop processing.
    b. If *Patients aged greater than or equal to 18 years on the date of the encounter* equals Yes, proceed to check *Diagnosis for minor blunt head trauma as listed in Denominator**.
3. Check *Diagnosis for minor blunt head trauma as listed in Denominator*:*
    a. If *Diagnosis for minor blunt head trauma as listed in Denominator** equals No, do not include in *Eligible Population/Denominator.* Stop processing.
    b. If *Diagnosis for minor blunt head trauma 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 *Encounters conducted via telehealth.*
5. Check *Encounters conducted via telehealth*:
    a. If *Encounters conducted via telehealth* equals Yes, do not include in *Eligible Population/Denominator*. Stop processing.
    b. If *Encounters conducted via telehealth* equals No, proceed to check *Patient presented with a minor blunt head trauma and had a head CT ordered for trauma by an emergency care provider*.
6. Check *Patient presented with a minor blunt head trauma and had a head CT ordered for trauma by an emergency care provider:*
    a. If *Patient presented with a minor blunt head trauma and had a head CT ordered for trauma by an emergency care provider* equals No, do not include in *Eligible Population/Denominator*. Stop processing.
    b. If *Patient presented with a minor blunt head trauma and had a head CT ordered for trauma by an emergency care provider* equals Yes, proceed to check *Patient has documentation of ventricular shunt, brain tumor, multisystem trauma, or is currently taking an antiplatelet medication including: abciximab, anagrelide, cangrelor, cilostazol, clopidogrel, dipyridamole, eptifibatide, prasugrel, ticlopidine, ticagrelor, tirofiban, or vorapaxar.*
7. Check *Patient has documentation of ventricular shunt, brain tumor, multisystem trauma, or is currently taking an antiplatelet medication including: abciximab, anagrelide, cangrelor, cilostazol, clopidogrel, dipyridamole, eptifibatide, prasugrel, ticlopidine, ticagrelor, tirofiban, or vorapaxar:*
    a. If *Patient has documentation of ventricular shunt, brain tumor, multisystem trauma, or is currently taking an antiplatelet medication including: abciximab, anagrelide, cangrelor, cilostazol, clopidogrel, dipyridamole,*

eptifibatide, prasugrel, ticlopidine, ticagrelor, tirofiban, or vorapaxar equals Yes, do not include in *Eligible Population/Denominator*. Stop processing.

b. If *Patient has documentation of ventricular shunt, brain tumor, multisystem trauma, or is currently taking an antiplatelet medication including: abciximab, anagrelide, cangrelor, cilostazol, clopidogrel, dipyridamole, eptifibatide, prasugrel, ticlopidine, ticagrelor, tirofiban, or vorapaxar* equals No, include in *Eligible Population/Denominator.*

8. 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.

9. Start Numerator

10. Check *Patient with minor blunt head trauma had an appropriate indication(s) for a head CT*:

    a. If *Patient with minor blunt head trauma had an appropriate indication(s) for a head CT* 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 40 visits in the Sample Calculation.

    b. If *Patient with minor blunt head trauma had an appropriate indication(s) for a head CT* equals No, proceed to check *Patient with minor blunt head trauma did not have an appropriate indication(s) for a head CT.*

11. Check *Patient with minor blunt head trauma did not have an appropriate indication(s) for a head CT*:

    a. If *Patient with minor blunt head trauma did not have an appropriate indication(s) for a head CT* 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 30 visits in the Sample Calculation.

    b. If *Patient with minor blunt head trauma did not have an appropriate indication(s) for a head CT* 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 40 visits) plus Performance Not Met (c equals 30 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 40 visits) divided by Data Completeness Numerator (70 visits). All equals 40 visits divided by 70 visits. All equals 57.14 percent.

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

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.