

E-CPR (Emergency – Clinical Performance Registry) Measure #39

Referenced Choosing Wisely, Emergency Medicine Campaign Measure #6

Measure Title: Avoid Head CT for Patients with Uncomplicated Syncope

Inverse Measure: No

Measure Description: Percentage of Adult Syncope Patients Who Did Not Receive a Head CT Scan Ordered by the Provider

National Quality Strategy Domain: Efficiency and Cost Reduction

Care Setting: Emergency Department and Services

Telehealth?: Yes

Type of Measure: Process, High Priority

Meaningful Measure Area: Appropriate use of Healthcare

Current Clinical Guideline: This measure reflects the best practice cited by the Choosing Wisely Campaign (American Board of Internal Medicine Foundation)

Clinical Category: Syncope

Number of Performance Rates: 1

Measure Scoring: Proportion

Numerator: Syncope Patients Who Did Not Have a Head CT Ordered by the Provider

Numerator Options

- **Performance Met (VE250):** Patients who did not have a head CT ordered
- **Medical Performance Exclusion (Denominator Exception) (VE251):** Patients who did have a head CT ordered for medical reason documented by the eligible professional (i.e., Seizure; alcohol/drug intoxication; vomiting; altered mental status; abnormal neurologic exam; concern for intracranial injury/hemorrhage, stroke, or mass lesion.)
- **Performance Not Met (VE252):** Patients who did have a head CT ordered, reason not given

Numerator Exclusions: None

Denominator:

- Any patient ≥18 years of age evaluated by the Eligible Professional in the Emergency Department or Urgent Care Clinic (E/M Codes 99201-99205, 99212-99215, 99281-99285, & 99291-99292 AND Place of Service Indicator: 11, 19, 20, 22 or 23) PLUS
- Diagnosis of Syncope:
 - **ICD-10:** R55
- Transferred, eloped or AMA patients are excluded (**V0700**)

Denominator Exclusions: None

Risk Adjustment: No

Rationale:

(Referenced Choosing Wisely, Emergency Medicine Campaign Measure #6)

Syncope (passing out or fainting) or near syncope (lightheadedness or almost passing out) is a common reason for visiting an emergency department or urgent care clinic and most episodes are not serious. Many tests may be ordered to identify the cause of such episodes. However, some diagnostic tests for syncope should not be routinely ordered, and the decision to order any tests should be guided by information obtained from the patient's history or physical examination. CT scans are expensive, and may unnecessarily expose patients to radiation. If a head injury is associated with a syncopal episode, then a CT scan of the brain may be indicated. In addition, if there were symptoms of a stroke (i.e., headache, garbled speech, weakness in one arm or leg, trouble walking or confusion) before or after a syncopal episode, a CT scan may be indicated. However, in the absence of head injury or signs of a stroke, a CT scan of the brain should not be routinely ordered. Recent studies show that there continues to be overutilization of neurological studies such as CT scans for patients with syncope, with little clinical benefit. In one study, only 6.4% of syncope patients who received head CTs had acutely abnormal findings (Mitsunaga, 2015). In a systematic review of studies on imaging for syncope, head CTs were the most common imaging test performed, and of those CTs performed, only 1.2% provided new diagnostic information. (Pournazari, 2017)

"The 2009 ESC guidelines recommended neurologic referral in patients in whom transient loss of consciousness is suspected to be epilepsy rather than syncope. In addition, neurologic referral to evaluate the underlying disease is indicated when syncope is due to autonomic failure. An EEG or carotid Doppler ultrasound study, computed tomography, or magnetic resonance imaging is not recommended unless a non-syncopal cause of transient loss of consciousness is suspected."

"Neurologic tests, including electroencephalogram (EEG), brain computed tomography scan, brain magnetic resonance imaging, and carotid Doppler ultrasound, are frequently obtained in patients with syncope. In one review of 649 patients, 53 percent had at least one neurologic test. However, such testing was rarely useful."

Selected References:

- American College of Emergency Physicians (ACEP) and Choosing Wisely Campaign
- Task Force for the Diagnosis and Management of Syncope, European Society of Cardiology (ESC), European Heart Rhythm Association (EHRA), Heart Failure Association (HFA), Heart Rhythm Society (HRS), Moya A, et al. Guidelines for the diagnosis and management of syncope. *Eur Heart J.* 2009;30(21):2631
- Mitsunaga M, Cho G. Head CT scans in the emergency department for syncope and dizziness. *Am Roentgen.* 2015;204:24-28.
- Pournazari P, Oqab Z, Sheldon R. Diagnostic value of neurological studies in diagnosing syncope: A systematic review. *Can J Cardiology.* 2017;33(12):1604-1610.
- Gallagher EJ. Hospitalization for fainting: high stakes, low yield. *Ann Emerg Med.* 1997 Apr;29(4):540-2.
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- Grossman SA, Fischer C, Bar JL, Lipsitz LA, Mottley L, Sands K, Thompson S, Zimetbaum P, Shapiro NI. The yield of head CT in syncope: a pilot study. *Intern Emerg Med.* 2007 Mar;2(1):46-9.
- Mendu ML, McAvay G, Lampert R, Stoehr J, Tinetti ME. Yield of diagnostic tests in evaluating syncopal episodes in older patients. *Arch Intern Med.* 2009 Jul 27;169(14):1299-305.