

Measure Title:

Quantum 31: Central Line Ultrasound Guidance

Measure Description

Percentage of patients, regardless of age, in whom ultrasound guidance is used by the anesthesia clinician when placing a central line for those central lines that are placed in the internal jugular location.

NQS Domain

Patient Safety

Instructions:

This measure is to be reported each time an anesthesia clinician places a central line in the internal jugular location (de novo placement). Performance of this metric requires clinician documentation that ultrasound guidance was performed at the time of central line placement.

Measure Reporting via the Qualified Clinical Data Registry

CPT codes and patient demographics are used to identify patients who are included in the measure's denominator. Registry codes are used to report the numerator of the measure.

Denominator

All patients, regardless of age, who undergo internal jugular central line placement by the anesthesia clinician.

Denominator Criteria (Eligible Cases):

All patients, regardless of age

AND

Patient encounter during the reporting period (CPT):

36555, 36556, 36557, 36558, 36560, 36561, 36563, 36565, 36566, 93503 **AND**

Internal jugular site insertion

Denominator Exclusion: Tunneled placement through same, existing site as

previously placed and currently indwelling non-tunneled placement.

Numerator:

Numerator Definition: Use of ultrasound guidance during the central line insertion when central line is placed at the internal jugular site.

Numerator Quality-Data Coding Options for Reporting Satisfactorily

Performance Met:

Mednax 52A: Clinician used ultrasound guidance during central line placement when internal jugular site used.

OR

Performance Not Met:

Mednax 52C: Clinician did not use ultrasound guidance during central line

placement when internal jugular site used.

Measure Type: Process
NQF Number: Not applicable
eCQM Number: Not applicable

Rationale

The use of ultrasound to guide central venous cannulation has been shown to decrease adverse events including but not limited to decreased risks of cannulation failure, arterial puncture, hematoma, and hemothorax. Benefits that relate to ultrasound guidance are most appreciable for internal jugular site insertion in contrast to either subclavian or femoral insertion.

References:

1. Wu, Shao-yong, et al. "Real-time Two-dimensional Ultrasound Guidance for Central Venous Cannulation." *Anesthesiology* 118.2 (2013): 361.
2. Bruzoni, Matias, et al. "A prospective randomized trial of ultrasound-vs landmark-guided central venous access in the pediatric population." *Journal of the American College of Surgeons* 216.5 (2013): 939-943.
3. Bass et al. Ultrasound guidance versus anatomical landmarks for subclavian or femoral vein catheterization. *Cochrane Database Syst Rev.* 2015 Jan 9;1. CD011447
4. Bass et al. Ultrasound guidance versus anatomical landmarks for internal jugular vein catheterization. *Cochrane Database Syst Rev.* 2015 Jan 9;1:CD006962.

Data Source: Claims, Medical Record, Registry
Measure Steward: MEDNAX Services, Inc.

Number of Multiple Performance Rates: Not applicable

Inverse Measure: No

Proportion Measure Scoring: Yes

Continuous Measure No

Scoring: Risk Adjustment: No

High Priority Measure: Yes

High Priority Type: Patient

Safety