

**Measure #345 (NQF 1543): Rate of Postoperative Stroke or Death in Asymptomatic Patients Undergoing Carotid Artery Stenting (CAS) – National Quality Strategy Domain: Effective Clinical Care**

**2017 OPTIONS FOR INDIVIDUAL MEASURES:**  
**REGISTRY ONLY**

**MEASURE TYPE:**  
Outcome

**DESCRIPTION:**  
Percent of asymptomatic patients undergoing CAS who experience stroke or death following surgery while in the hospital

**INSTRUCTIONS:**  
This measure is to be reported **each time** a CAS is performed during the **performance period**. It is anticipated that eligible clinicians who provide services of CAS, as described in the measure, based on the services provided and the measure-specific denominator coding will report this measure. This measure may be reported by eligible clinicians who perform the quality actions described in the measure based on the services provided and the measure-specific denominator coding.

**Measure Reporting:**  
The listed denominator criteria is used to identify the intended patient population. The numerator options included in this specification are used to submit the quality actions allowed by the measure. The quality-data codes listed do not need to be submitted for registry-based submissions; however, these codes may be submitted for those registries that utilize claims data.

**DENOMINATOR:**  
Patients aged 18 and older who are asymptomatic undergoing CAS

**Denominator Criteria (Eligible Cases):**

Patients aged 18 and older

**AND**

Patient procedure during **performance period** (CPT): 37215

**AND NOT**

**DENOMINATOR EXCLUSIONS:**

Symptomatic carotid stenosis: Ipsilateral carotid territory TIA or stroke less than 120 days prior to procedure: 9006F

**OR**

Other carotid stenosis: Ipsilateral TIA or stroke 120 days or greater prior to procedure or any prior contralateral carotid territory or vertebrobasilar TIA or stroke: 9007F

**NUMERATOR:**  
Patients who experience stroke or death in the hospital following CAS

**Numerator Instructions:**

**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. Reporting 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:*

Documentation of patient stroke following CAS (G9257)

**OR**

*Performance Met:*

Documentation of patient death following CAS (G9256)

**OR**

*Performance Not Met:*

Documentation of patient survival and absence of stroke following CAS (G9259)

**RATIONALE:**

Surgeons performing CAS on asymptomatic patients must select patients at low risk for morbidity and perform the procedure with a very low complication rate in order to achieve benefit. The proposed measure will therefore serve as an indicator of both appropriateness and overall outcome.

**CLINICAL RECOMMENDATION STATEMENTS:**

Updated Society for Vascular Surgery guidelines for management of extracranial carotid disease. Ricotta et al, J Vasc Surg, 54:3, 2011

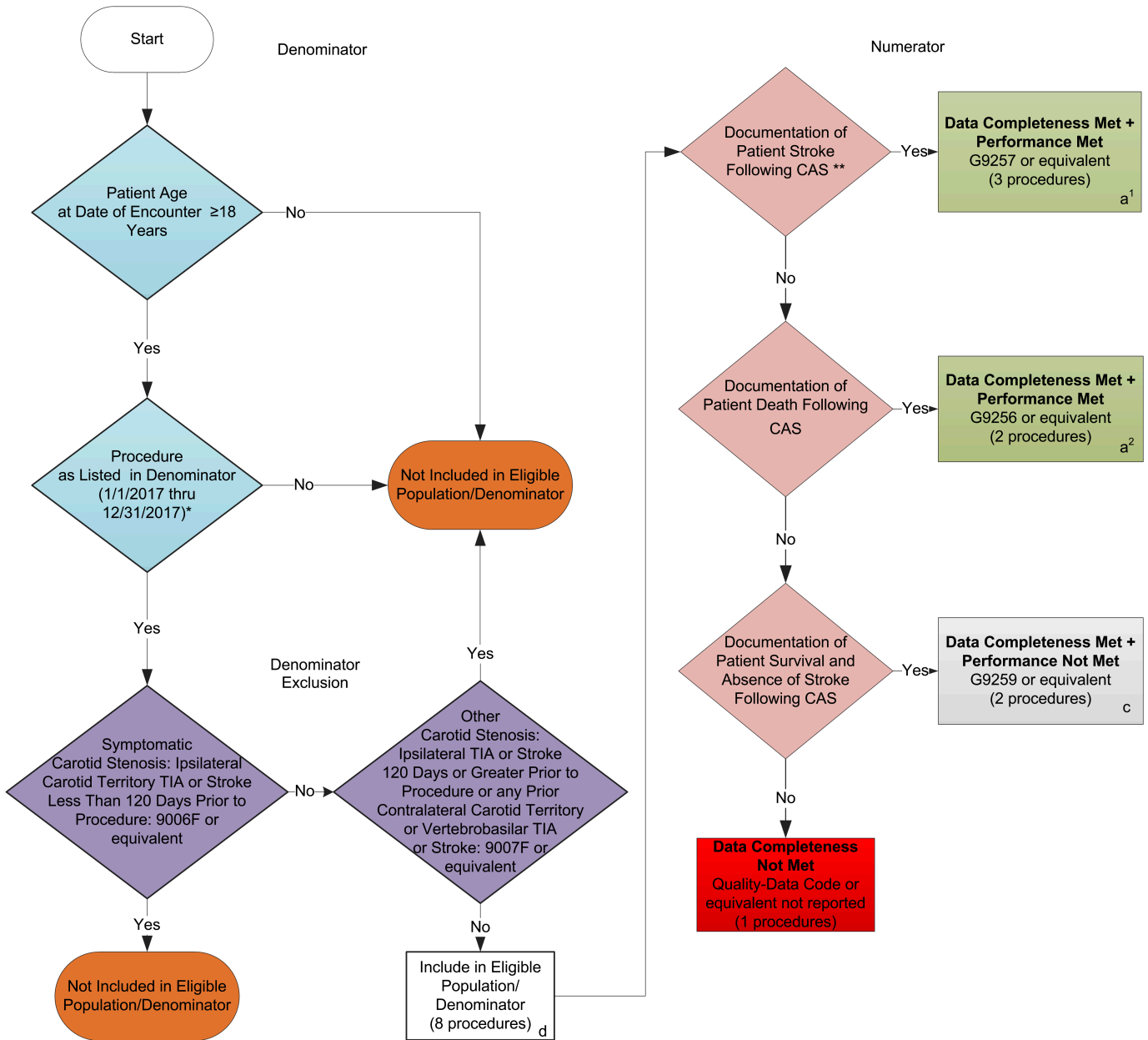
Neurologically asymptomatic patients with  $\geq 60\%$  diameter stenosis should be considered for CAS for reduction of long-term risk of stroke, provided the patient has a 3- to 5-year life expectancy and perioperative stroke/death rates can be  $\leq 3\%$  (GRADE 1, Level of Evidence A).

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## 2017 Registry Individual Measure Flow

### #345 NQF #1543: Rate of Postoperative Stroke or Death in Asymptomatic Patients Undergoing Carotid Artery Stenting (CAS)



**SAMPLE CALCULATIONS:**

**Data Completeness=**  

$$\frac{\text{Performance Met (a}^1 + \text{a}^2 = 5 \text{ procedures)} + \text{Performance Not Met (c=2 procedures)}}{\text{Eligible Population / Denominator (d=8 procedures)}} = \frac{7 \text{ procedures}}{8 \text{ procedures}} = 87.50\%$$

**Performance Rate=**  

$$\frac{\text{Performance Met (a}^1 + \text{a}^2 = 5 \text{ procedures)}}{\text{Data Completeness Numerator (7 procedures)}} = \frac{5 \text{ procedures}}{7 \text{ procedures}} = 71.43\%$$

\* See the posted Measure Specification for specific coding and instructions to report this measure.  
 \*\* A lower calculated performance rate for this measure indicates better clinical care or control.  
 NOTE: Reporting Frequency: Procedure

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 v1

## 2017 Registry Individual Measure Flow

### #345 NQF 1543: Rate of Postoperative Stroke or Death in Asymptomatic Patients Undergoing Carotid Artery Stenting (CAS)

Please refer to the specific section of the Measure Specification to identify the denominator and numerator information for use in reporting this Individual Measure.

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

1. Start with Denominator
2. Check Patient Age:
  - a. If Patient Age at Date of Encounter is equal to or greater than 18 Years equals No during the measurement period, do not include in Eligible Patient Population. Stop Processing.
  - b. If Patient Age at Date of Encounter is equal to or greater than 18 Years equals Yes during the measurement period, proceed to Procedure Performed.
3. Check Procedure Performed:
  - a. If Procedure as Listed in the Denominator equals No, do not include in Eligible Population or Denominator. Stop Processing.
  - b. If Procedure as Listed in the Denominator equals Yes, proceed to Not Symptomatic Carotid Stenosis.
4. Check Not Symptomatic Carotid Stenosis:
  - a. If Not Symptomatic Carotid Stenosis: Ipsilateral Carotid Territory TIA or Stroke less than 120 days Prior to Procedure 9006F or equivalent equals Yes, do not include in Eligible Population or Denominator. Stop Processing.
  - b. If Not Symptomatic Carotid Stenosis: Ipsilateral Carotid Territory TIA or Stroke less than 120 days Prior to Procedure 9006F equals No, proceed to check Not Other Carotid Stenosis.
5. Check Not Other Carotid Stenosis:
  - a. If Not Other Carotid Stenosis: Ipsilateral TIA or Stroke 120 Days or Greater Prior to Procedure or any Prior Contralateral Carotid Territory or Vertebrobasilar TIA or Stroke 9007F equals Yes, do not include in Eligible Population or Denominator. Stop Processing.
  - b. If Not Other Carotid Stenosis: Ipsilateral TIA or Stroke 120 Days or Greater Prior to Procedure or any Prior Contralateral Carotid Territory or Vertebrobasilar TIA or Stroke 9007F equals No, include in the Eligible population.
6. Denominator Population:
  - a. Denominator population is all eligible patients in the denominator. Denominator is represented as Denominator in the Sample Calculation listed at the end of this document. Letter d equals 8 procedures in the sample calculation.
7. Start Numerator
8. Check Documentation of Patient Stroke Following CAS:

- a. If Documentation of Patient Stroke Following CAS equals Yes, include in Data Completeness Met and Performance Met.
  - b. Data Completeness Met and Performance Met is represented in the Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter a<sup>1</sup> equals 3 procedures in Sample Calculation.
  - c. If Documentation of Patient Stroke Following CAS equals No, proceed to check Documentation of Patient Death following CAS.
9. Check Documentation of Patient Death following CAS:
- a. If Documentation of Patient Death following CAS equals Yes, include in Data Completeness Met and Performance Met.
  - b. Data Completeness Met and Performance Met is represented in the Data Completeness in the Sample Calculation listed at the end of this document. Letter a<sup>2</sup> equals 2 procedures in the Sample Calculation.
  - c. If Documentation of Patient Death following CAS Documentation of Patient Death following CAS equals No, proceed to Documentation of Patient Survival and Absence of Stroke Following CAS.
10. Check Documentation of Patient Survival and Absence of Stroke Following CAS:
- a. If Documentation of Patient Survival and Absence of Stroke Following CAS equals Yes, include in Data Completeness Met and Performance Not Met.
  - b. Data Completeness Met and Performance Not Met is represented in the Data Completeness in the Sample Calculation listed at the end of this document. Letter c equals 2 procedures in the Sample Calculation.
  - c. If Documentation of Patient Survival and Absence of Stroke Following CAS equals No, proceed to Data Completeness Not Met.
11. Check Data Completeness Not Met:
- a. If Data Completeness Not Met, the Quality Data Code or equivalent was not reported. 1 episode has been subtracted from the Data Completeness numerator in sample calculation.

**SAMPLE CALCULATIONS:**

**Data Completeness=**

$$\frac{\text{Performance Met (a}^1 + \text{a}^2 = 5 \text{ procedures)} + \text{Performance Not Met (c=2 procedures)}}{\text{Eligible Population / Denominator (d=8 procedures)}} = \frac{7 \text{ procedures}}{8 \text{ procedures}} = 87.50\%$$

**Performance Rate=**

$$\frac{\text{Performance Met (a}^1 + \text{a}^2 = 5 \text{ procedures)}}{\text{Data Completeness Numerator (7 procedures)}} = \frac{5 \text{ procedures}}{7 \text{ procedures}} = 71.43\%$$