

Quality ID #392 (NQF 2474): HRS-12: Cardiac Tamponade and/or Pericardiocentesis Following Atrial Fibrillation Ablation – National Quality Strategy Domain: Patient Safety

2018 OPTIONS FOR INDIVIDUAL MEASURES:
REGISTRY ONLY

MEASURE TYPE:
Outcome

DESCRIPTION:

Rate of cardiac tamponade and/or pericardiocentesis following atrial fibrillation ablation. This measure is submitted as four rates stratified by age and gender:

- Submission Age Criteria 1: Females 18-64 years of age
- Submission Age Criteria 2: Males 18-64 years of age
- Submission Age Criteria 3: Females 65 years of age and older
- Submission Age Criteria 4: Males 65 years of age and older

INSTRUCTIONS:

This measure is to be submitted a minimum of **once per performance period** for patients with atrial fibrillation ablation performed during the performance period. This measure may be submitted by eligible clinicians who perform the quality actions described in the measure based on the services provided and the measure-specific denominator coding.

***NOTE:** Include only patients that have had atrial fibrillation ablation performed by November 30, 2018, for evaluation of cardiac tamponade and/or pericardiocentesis occurring within 30 days within the performance period. This will allow the evaluation of cardiac tamponade and/or pericardiocentesis complications within the performance period. A minimum of 30 cases is recommended by the measure owner to ensure a volume of data that accurately reflects provider performance; however, this minimum number is **not required** for purposes of QPP submission.*

This measure will be calculated with 5 performance rates:

- 1) Females 18-64 years of age
- 2) Males 18-64 years of age
- 3) Females 65 years of age and older
- 4) Males 65 years of age and older
- 5) Overall percentage of patients with cardiac tamponade and/or pericardiocentesis occurring within 30 days

Eligible clinicians should continue to submit the measure as specified, with no additional steps needed to account for multiple performance rates.

Measure Submission:

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 submissions; however, these codes may be submitted for those registries that utilize claims data.

DENOMINATOR:

All patients aged 18 years and older with atrial fibrillation ablation performed during the reporting period

Denominator Criteria (Eligible Cases):

SUBMISSION CRITERIA 1: Females 18-64 years old

SUBMISSION CRITERIA 2: Males 18-64 years old

SUBMISSION CRITERIA 3: Females 65 years of age and older

SUBMISSION CRITERIA 4: Males 65 years of age and older

AND

Diagnosis code for atrial fibrillation (ICD-10-CM): I48.0, I48.1, I48.2, I48.91

AND

Procedure code for atrial fibrillation ablation (ICD-10-PCS): 02583ZZ, 02584ZZ

AND/OR

Ablation procedures that have been performed by November 30 of current performance period (CPT): 93655, 93656, 93657

NUMERATOR:

The number of patients from the denominator with cardiac tamponade and/or pericardiocentesis occurring within 30 days following atrial fibrillation ablation

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. 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:

Patients with cardiac tamponade and/or pericardiocentesis occurring within 30 days (**G9408**)

OR

Performance Not Met:

Patients without cardiac tamponade and/or pericardiocentesis occurring within 30 days (**G9409**)

RATIONALE:

Cardiac tamponade is one of the most serious complications of atrial fibrillation ablation that can lead to substantial morbidity due to a significant drop in the cardiac output and blood pressure leading to hypo-perfusion of important organs such as the brain, heart and kidneys. In many cases, cardiac tamponade has to be treated surgically, and it invariably prolongs hospital stay. If not treated promptly, cardiac tamponade can lead to death. The risk of this dreaded complication has been reported to range from 2 to 6%; however, these rates were observed in tertiary referral centers where the procedure was performed by experienced and skillful operators. Given that the occurrence of cardiac tamponade is largely dependent on the operator's level of experience and, therefore, is in most cases preventable, higher rates are expected to occur when less experienced operators perform the procedure. These issues prove the need to measure performance in this area.

CLINICAL RECOMMENDATION STATEMENTS:

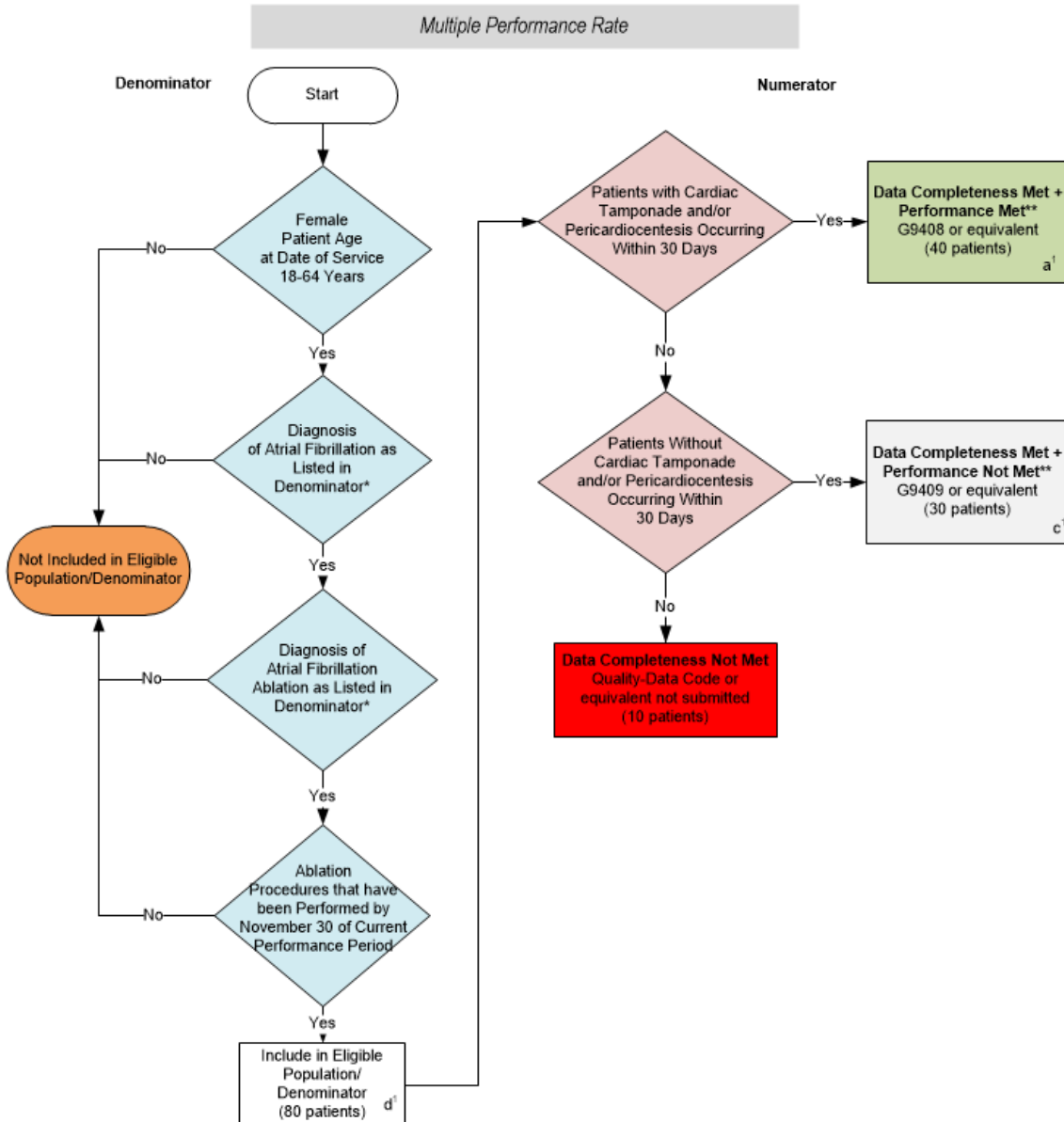
In recognition that there is an absence of applicable physician-level performance measures for the profession of cardiac electrophysiology, the Heart Rhythm Society (the international professional society focused on the care of patients with heart rhythm disorders) convened a Performance Measures Development Task Force to consider and develop potential physician-level measures cardiac electrophysiologists. The task force consisted of thought leaders in atrial fibrillation ablation, cardiovascular health policy, performance measures development, clinical outcomes, and population science. The process for consideration of the evidence included review of multi-stakeholder professional society clinical expert consensus statements on the topic, such as the 2012 Heart Rhythm Society/European Heart Rhythm Association/European Cardiac Arrhythmia Society Expert Consensus Statement on Catheter and Surgical Ablation of Atrial Fibrillation (Calkins et al, 2012), and the relevant literature both referenced within this document and in the knowledge of the members of the task force (Cappato et al, 2005; Hsu et al, 2005; Andrade et al, 2011; Bunch et al, 2005; Cappato et al, 2009; Cappato et al, 2010; Cappato et al, 2011; Fisher et al, 2000; Hsu et al, 2003; Latchamsetty et al, 2011; O'Neill et al, 2008; Tsang et al, 2002).

The expert consensus statement does not provide a specific recommendation related to this proposed outcome measure, but rather summarizes that in high-volume and high-quality programs, the incidence of complications in general should be comparable to the low rates of complications observed in published studies, including the world-wide survey of atrial fibrillation ablation (Cappato et al, 2005; Cappato et al, 2009; Cappato et al, 2010; Cappato et al, 2011). Collectively, the incidence of this complication has in general ranged from between 1.2 and 2.4% across the literature evaluated ((Cappato et al, 2005; Hsu et al, 2005; Calkins et al, 2012; Andrade et al, 2011; Bunch et al, 2005; Cappato et al, 2009; Cappato et al, 2010; Cappato et al, 2011; Fisher et al, 2000; Hsu et al, 2003; Latchamsetty et al, 2011; O'Neill et al, 2008; Tsang et al, 2002).

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**2018 Registry Flow for Quality ID #392 NQF #2474:
HRS-12: Cardiac Tamponade and/or Pericardiocentesis Following Atrial Fibrillation Ablation
Submission Criteria One**



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

***For the purpose of demonstrating the performance rates for this measure the following will apply:

- a1 = Females 18-64 years of age
- a2 = Males 18-64 years of age
- a3 = Females 65 years of and older
- a4 = Males 65 years of age and older

Those 4 rates will be combined to calculate an overall Data Completeness and Performance Rate

****It is anticipated for registry submission that for every performance rate, a data completeness will be submitted. CMS will determine or use the overall data completeness and performance rate.

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

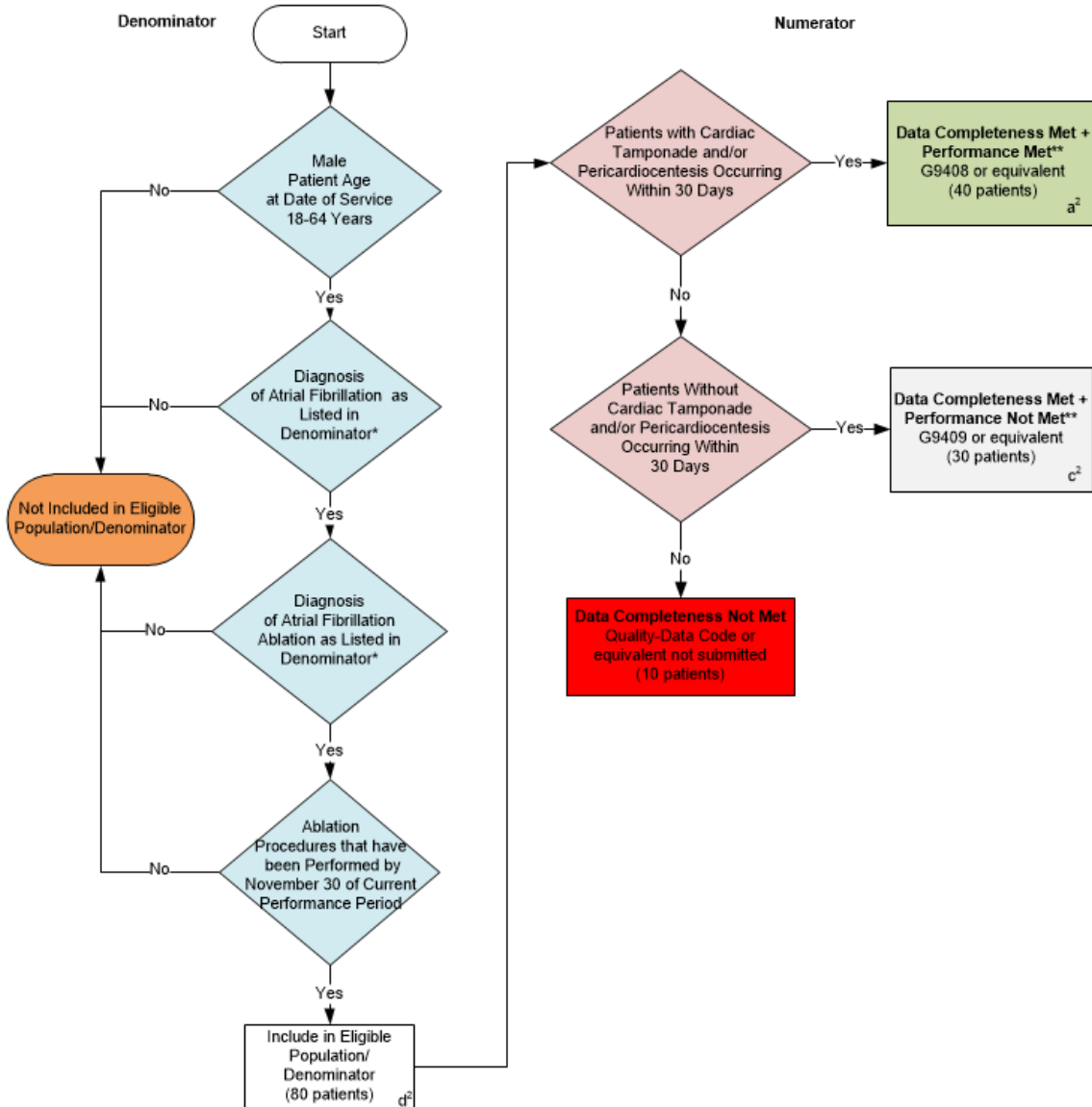
NOTE: Submission Frequency: Patient - process

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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.

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**2018 Registry Flow for Quality ID #392 NQF#2474: HRS-12:
Cardiac Tamponade and/or Pericardiocentesis Following Atrial Fibrillation Ablation
Submission Criteria Two**

Multiple Performance Rate



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

***For the purpose of demonstrating the performance rates for this measure the following will apply:

- a1 = Females 18-64 years of age
- a2 = Males 18-64 years of age
- a3 = Females 65 years of age and older
- a4 = Males 65 years of age and older

Those 4 rates will be combined to calculate an overall Data Completeness and Performance Rate

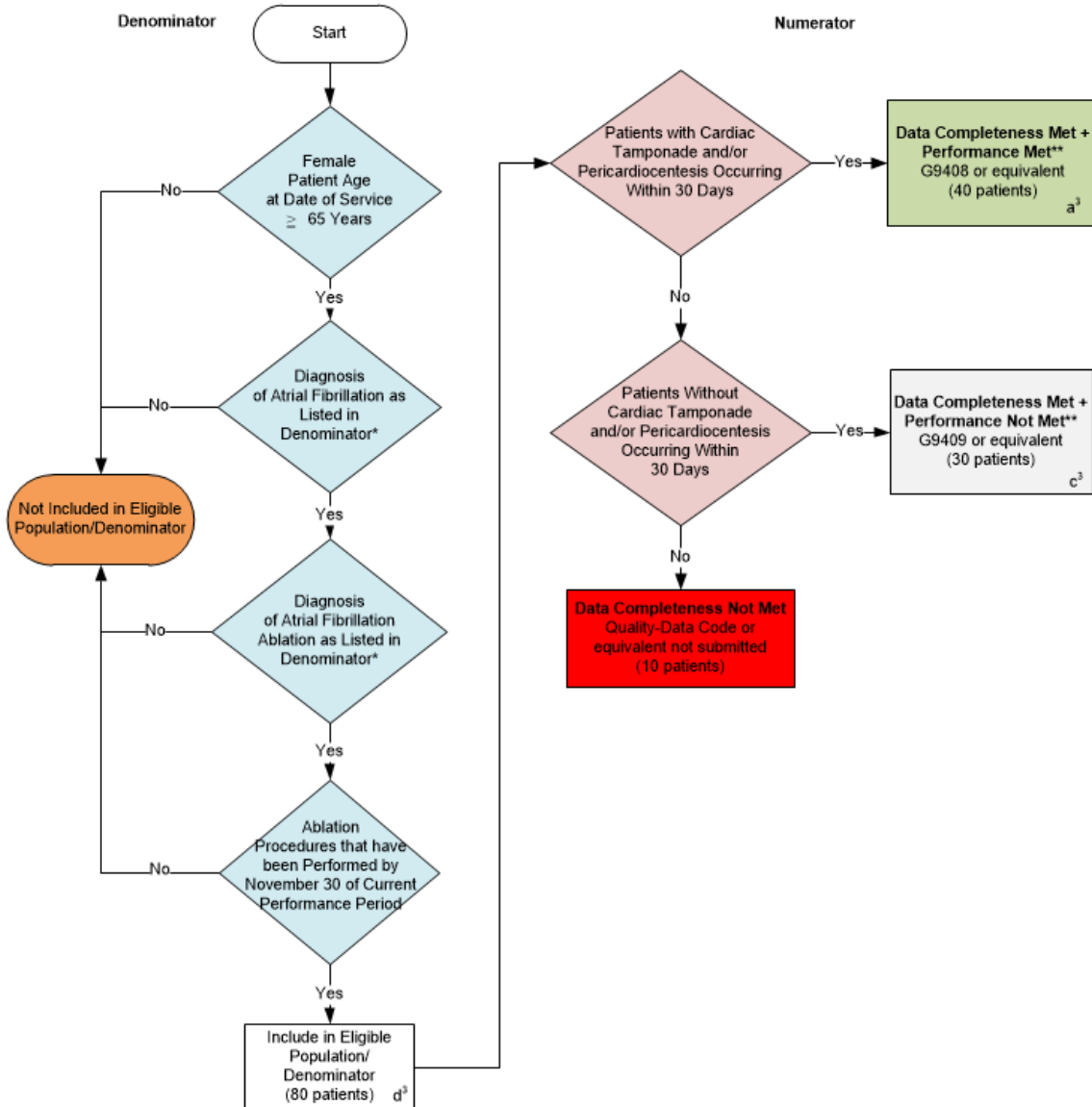
****It is anticipated for registry submission that for every performance rate, a data completeness will be submitted. CMS will determine or use the overall data completeness and performance rate.

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

NOTE: Submission Frequency: Patient - process

**2018 Registry Flow for Quality ID #392 NQF#2474:
HRS-12: Cardiac Tamponade and/or Pericardiocentesis Following Atrial Fibrillation Ablation
Submission Criteria Three**

Multiple Performance Rate



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

***For the purpose of demonstrating the performance rates for this measure the following will apply:

a1 = Females 18-64 years of age

a2 = Males 18-64 years of age

a3 = Females 65 years of and older

a4 = Males 65 years of age and older

Those 4 rates will be combined to calculate an overall Data Completeness and Performance Rate

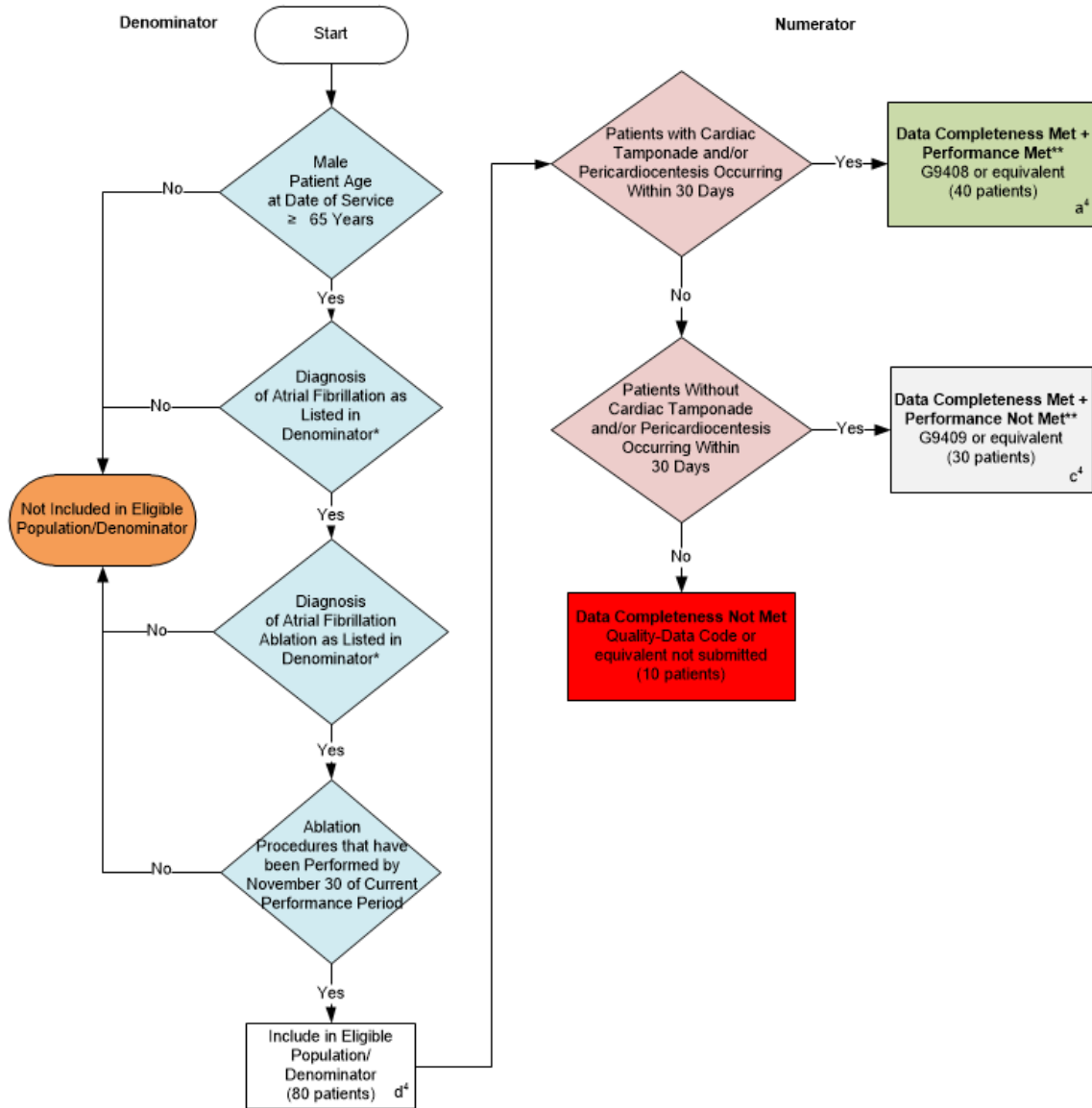
****it is anticipated for registry submission that for every performance rate, a data completeness will be submitted. CMS will determine or use the overall data completeness and performance rate.

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

NOTE: Submission Frequency: Patient - process

**2018 Registry Flow for Quality ID #392 NQF #2474: HRS-12:
Cardiac Tamponade and/or Pericardiocentesis Following Atrial Fibrillation Ablation
Submission Criteria Four**

Multiple Performance Rate



*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.

***For the purpose of demonstrating the performance rates for this measure the following will apply:

- a1 = Females 18-64 years of age
- a2 = Males 18-64 years of age
- a3 = Females 65 years of and older
- a4 = Males 65 years of age and older

Those 4 rates will be combined to calculate an overall Data Completeness and Performance Rate

****It is anticipated for registry submission that for every performance rate, a data completeness will be submitted. CMS will determine or use the overall data completeness and performance rate.

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

NOTE: Submission Frequency: Patient - process

**2018 Registry Flow for Quality ID #392 NQF #2474:
HRS-12: Cardiac Tamponade and/or Pericardiocentesis Following Atrial Fibrillation Ablation**

SAMPLE CALCULATIONS: Submission and Performance Rate One: Females 18-64 Years of Age

Data Completeness=

$$\frac{\text{Performance Met (a}^1=40 \text{ patients)} + \text{Performance Not Met (c}^1=30 \text{ patients)}}{\text{Eligible Population / Denominator (d}^1=80 \text{ patients)}} = \frac{70 \text{ patients}}{80 \text{ patients}} = 87.50\%$$

Performance Rate**=

$$\frac{\text{Performance Met (a}^1=40 \text{ patients)}}{\text{Data Completeness Numerator (70 patients)}} = \frac{40 \text{ patients}}{70 \text{ patients}} = 57.14\%$$

SAMPLE CALCULATIONS: Submission and Performance Rate Two: Males 18-64 Years of Age

Data Completeness=

$$\frac{\text{Performance Met (a}^2=40 \text{ patients)} + \text{Performance Not Met (c}^2=30 \text{ patients)}}{\text{Eligible Population / Denominator (d}^2=80 \text{ patients)}} = \frac{70 \text{ patients}}{80 \text{ patients}} = 87.50\%$$

Performance Rate**=

$$\frac{\text{Performance Met (a}^2=40 \text{ patients)}}{\text{Data Completeness Numerator (70 patients)}} = \frac{40 \text{ patients}}{70 \text{ patients}} = 57.14\%$$

SAMPLE CALCULATIONS: Submission and Performance Rate Three: Females ≥ 65 Years of Age

Data Completeness=

$$\frac{\text{Performance Met (a}^3=40 \text{ patients)} + \text{Performance Not Met (c}^3=30 \text{ patients)}}{\text{Eligible Population / Denominator (d}^3=80 \text{ patients)}} = \frac{70 \text{ patients}}{80 \text{ patients}} = 87.50\%$$

Performance Rate**=

$$\frac{\text{Performance Met (a}^3=40 \text{ patients)}}{\text{Data Completeness Numerator (70 patients)}} = \frac{40 \text{ patients}}{70 \text{ patients}} = 57.14\%$$

SAMPLE CALCULATIONS: Submission and Performance Rate Four: Males ≥ 65 Years of Age

Data Completeness=

$$\frac{\text{Performance Met (a}^4=40 \text{ patients)} + \text{Performance Not Met (c}^4=30 \text{ patients)}}{\text{Eligible Population / Denominator (d}^4=80 \text{ patients)}} = \frac{70 \text{ patients}}{80 \text{ patients}} = 87.50\%$$

Performance Rate**=

$$\frac{\text{Performance Met (a}^4=40 \text{ patients)}}{\text{Data Completeness Numerator (70 patients)}} = \frac{40 \text{ patients}}{70 \text{ patients}} = 57.14\%$$

SAMPLE CALCULATIONS: Overall Performance Rate****

Data Completeness=

$$\frac{\text{Performance Met (a}^1+a^2+a^3+a^4=160 \text{ patients)} + \text{Performance Not Met (c}^1+c^2+c^3+c^4=120 \text{ patients)}}{\text{Eligible Population / Denominator (d}^1+d^2+d^3+d^4=320 \text{ patients)}} = \frac{280 \text{ patients}}{320 \text{ patients}} = 87.50\%$$

Performance Rate**=

$$\frac{\text{Performance Met (a}^1+a^2+a^3+a^4=160 \text{ patients)}}{\text{Data Completeness Numerator (280 patients)}} = \frac{160 \text{ patients}}{280 \text{ patients}} = 57.14\%$$

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

***For the purpose of demonstrating the performance rates for this measure the following will apply:

- a1 = Females less than 65 years of age
- a2 = Males less than 65 years of age
- a3 = Females 65 years of and older
- a4 = Males 65 years of age and older

Those 4 rates will be combined to calculate an overall Data Completeness and Performance Rate
 ****It is anticipated for registry submission that for every performance rate, a data completeness will be submitted. CMS will determine or use the overall data completeness and performance rate.

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

NOTE: Submission Frequency: Patient - process

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2018 Registry Flow for Quality ID #392 NOF #2474:

HRS-12: Cardiac Tamponade and/or Pericardiocentesis Following Atrial Fibrillation Ablation

Please refer to the specific section of the Specification to identify the denominator and numerator information for use in submitting this Individual Specification. This flow is for registry data submission.

This measure will be calculated with 5 submission rates and submitted. Eligible clinicians should continue to submit the measure as specified, with no additional steps needed to account for multiple performance rates.

Submission Criteria One:

1. Start with Denominator
2. Check Patient Age:
 - a. If Female Age is 18-64 years of age on Date of Service equals No during the Performance Period, do not include in Eligible Patient Population. Stop Processing.
 - b. If Female Age is 18-64 years of age on Date of Service equals Yes during the Performance Period, proceed to check Patient Diagnosis.
3. Check Patient Diagnosis:
 - a. If Diagnosis of Atrial Fibrillation as Listed in the Denominator equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Diagnosis of Atrial Fibrillation as Listed in the Denominator equals Yes, proceed to check Diagnosis of Atrial Fibrillation Ablation.
4. Check Diagnosis of Atrial Fibrillation Ablation:
 - a. If Diagnosis of Atrial Fibrillation Ablation as Listed in the Denominator equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Diagnosis of Atrial Fibrillation as Listed in the Denominator equals Yes, proceed to check Ablation Procedures that have been Performed by November 30 of Current Performance Period.
5. Check Ablation Procedures that have been Performed by November 30 of Current Performance Period:
 - a. If Ablation Procedures that have been Performed by November 30 of Current Performance Period equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Ablation Procedures that have been Performed by November 30 of Current Performance Period equals Yes, include in 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 d¹ equals 80 patients in the Sample Calculation.
7. Start Numerator
8. Check Patients with Cardiac Tamponade and/or Pericardiocentesis Occurring within 30 days:

- a. If Patients with Cardiac Tamponade and/or Pericardiocentesis Occurring within 30 days 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 a¹ equals 40 patients in the Sample Calculation.
 - c. If Patients With Cardiac Tamponade and/or Pericardiocentesis Occurring Within 30 Days equals No, proceed to check Patients Without Cardiac Tamponade and/or Pericardiocentesis Occurring within 30 days.
9. Check Patients Without Cardiac Tamponade and/or Pericardiocentesis Occurring Within 30 Days:
- a. If Patients Without Cardiac Tamponade and/or Pericardiocentesis Occurring Within 30 Days equals Yes, include in the 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 c¹ equals 30 patients in the Sample Calculation.
 - c. If Patients Without Cardiac Tamponade and/or Pericardiocentesis Occurring Within 30 Days equals No, proceed to Data Completeness Not Met.
10. Check Data Completeness Not Met
- a. If Data Completeness Not Met equals No, Quality Data Code or equivalent was not submitted. 10 patients have been subtracted from Data Completeness Numerator in the Sample Calculation.

Submission Criteria Two:

1. Start with Denominator
2. Check Patient Age:
 - a. If Male Age is 18-64 years of age on Date of Service equals No during the Performance Period, do not include in Eligible Patient Population. Stop Processing.
 - b. If Male Age 18-64 years of age on Date of Service equals Yes during the Performance Period, proceed to check Patient Diagnosis.
3. Check Patient Diagnosis:
 - a. If Diagnosis of Atrial Fibrillation as Listed in the Denominator equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Diagnosis of Atrial Fibrillation as Listed in the Denominator equals Yes, proceed to check Diagnosis of Atrial Fibrillation Ablation.
4. Check Diagnosis of Atrial Fibrillation Ablation:
 - a. If Diagnosis of Atrial Fibrillation Ablation as Listed in the Denominator equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Diagnosis of Atrial Fibrillation as Listed in the Denominator equals Yes, proceed to check Ablation Procedures that have been Performed by November 30 of Current Performance Period
5. Check Ablation Procedures that have been Performed by November 30 of Current Performance Period:

- a. If Ablation Procedures that have been Performed by November 30 of Current Performance Period equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Ablation Procedures that have been Performed by November 30 of Current Performance Period equals Yes, include in 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 d² equals 80 patients in the Sample Calculation.
7. Start Numerator
8. Check Patients with Cardiac Tamponade and/or Pericardiocentesis Occurring within 30 days:
- a. If Patients with Cardiac Tamponade and/or Pericardiocentesis Occurring within 30 days 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 a² equals 40 patients in the Sample Calculation.
 - c. If Patients With Cardiac Tamponade and/or Pericardiocentesis Occurring Within 30 Days equals No, proceed to check Patients Without Cardiac Tamponade and/or Pericardiocentesis Occurring within 30 days.
9. Check Patients Without Cardiac Tamponade and/or Pericardiocentesis Occurring Within 30 Days:
- a. If Patients Without Cardiac Tamponade and/or Pericardiocentesis Occurring Within 30 Days equals Yes, include in the 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 c² equals 30 patients in the Sample Calculation.
 - c. If Patients Without Cardiac Tamponade and/or Pericardiocentesis Occurring Within 30 Days equals No, proceed to Data Completeness Not Met.
10. Check Data Completeness Not Met
- a. If Data Completeness Not Met equals No, Quality Data Code or equivalent was not submitted. 10 patients have been subtracted from Data Completeness Numerator in the Sample Calculation.

Submission Criteria Three:

1. Start with Denominator
2. Check Patient Age:
 - a. If Female Age is greater than or equal to 65 years of age on Date of Service equals No during the Performance Period, do not include in Eligible Patient Population. Stop Processing.
 - b. If Female Age is greater than or equal to 65 years of age on Date of Service equals Yes during the Performance Period, proceed to check Patient Diagnosis.
3. Check Patient Diagnosis:

- a. If Diagnosis of Atrial Fibrillation as Listed in the Denominator equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Diagnosis of Atrial Fibrillation as Listed in the Denominator equals Yes, proceed to check Diagnosis of Atrial Fibrillation Ablation.
4. Check Diagnosis of Atrial Fibrillation Ablation:
- a. If Diagnosis of Atrial Fibrillation Ablation as Listed in the Denominator equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Diagnosis of Atrial Fibrillation as Listed in the Denominator equals Yes, proceed to check Ablation Procedures that have been Performed by November 30 of Current Performance Period.
5. Check Ablation Procedures that have been Performed by November 30 of Current Performance Period:
- a. If Ablation Procedures that have been Performed by November 30 of Current Performance Period equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Ablation Procedures that have been Performed by November 30 of Current Performance Period equals Yes, include in 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 d³ equals 80 patients in the Sample Calculation.
7. Start Numerator
8. Check Patients with Cardiac Tamponade and/or Pericardiocentesis Occurring within 30 days:
- a. If Patients with Cardiac Tamponade and/or Pericardiocentesis Occurring within 30 days 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 a³ equals 40 patients in the Sample Calculation.
 - c. If Patients With Cardiac Tamponade and/or Pericardiocentesis Occurring Within 30 Days equals No, proceed to check Patients Without Cardiac Tamponade and/or Pericardiocentesis Occurring within 30 days.
9. Check Patients Without Cardiac Tamponade and/or Pericardiocentesis Occurring Within 30 Days:
- a. If Patients Without Cardiac Tamponade and/or Pericardiocentesis Occurring Within 30 Days equals Yes, include in the 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 c³ equals 30 patients in the Sample Calculation.
 - c. If Patients Without Cardiac Tamponade and/or Pericardiocentesis Occurring Within 30 Days equals No, proceed to Data Completeness Not Met.
10. Check Data Completeness Not Met

- a. If Data Completeness Not Met equals No, Quality Data Code or equivalent was not submitted. 10 patients have been subtracted from Data Completeness Numerator in the Sample Calculation.

Submission Criteria Four:

1. Start with Denominator
2. Check Patient Age:
 - a. If Male Age is greater than or equal to 65 years of age on Date of Service equals No during the Performance Period, do not include in Eligible Patient Population. Stop Processing.
 - b. If Male Age is greater than or equal to 65 years of age on Date of Service equals Yes during the Performance Period, proceed to check Patient Diagnosis.
3. Check Patient Diagnosis:
 - a. If Diagnosis of Atrial Fibrillation as Listed in the Denominator equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Diagnosis of Atrial Fibrillation as Listed in the Denominator equals Yes, proceed to check Diagnosis of Atrial Fibrillation Ablation.
4. Check Diagnosis of Atrial Fibrillation Ablation:
 - a. If Diagnosis of Atrial Fibrillation Ablation as Listed in the Denominator equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Diagnosis of Atrial Fibrillation as Listed in the Denominator equals Yes, proceed to check Ablation Procedures that have been Performed by November 30 of Current Performance Period.
5. Check Ablation Procedures that have been Performed by November 30 of Current Performance Period:
 - a. If Ablation Procedures that have been Performed by November 30 of Current Performance Period equals No, do not include in Eligible Patient Population. Stop Processing.
 - b. If Ablation Procedures that have been Performed by November 30 of Current Performance Period equals Yes, include in 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 d⁴ equals 80 patients in the Sample Calculation.
7. Start Numerator
8. Check Patients with Cardiac Tamponade and/or Pericardiocentesis Occurring within 30 days:
 - a. If Patients with Cardiac Tamponade and/or Pericardiocentesis Occurring within 30 days 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 a⁴ equals 40 patients in the Sample Calculation.

- c. If Patients With Cardiac Tamponade and/or Pericardiocentesis Occurring Within 30 Days equals No, proceed to check Patients Without Cardiac Tamponade and/or Pericardiocentesis Occurring within 30 days.
- 9. Check Patients Without Cardiac Tamponade and/or Pericardiocentesis Occurring Within 30 Days:
 - a. If Patients Without Cardiac Tamponade and/or Pericardiocentesis Occurring Within 30 Days equals Yes, include in the Data Completeness Met and Performance Not Met.
 - b. Data Completeness Met and Performance Not Met is represented in the Data Completeness and Performance Rate in the Sample Calculation listed at the end of this document. Letter c⁴ equals 30 patients in the Sample Calculation.
 - c. If Patients Without Cardiac Tamponade and/or Pericardiocentesis Occurring Within 30 Days equals No, proceed to Data Completeness Not Met.
- 10. Check Data Completeness Not Met
 - a. If Data Completeness Not Met equals No, Quality Data Code or equivalent was not submitted. 10 patients have been subtracted from Data Completeness Numerator in the Sample Calculation.

**2018 Registry Flow for Quality ID #392 NQF #2474:
HRS-12: Cardiac Tamponade and/or Pericardiocentesis Following Atrial Fibrillation Ablation**

SAMPLE CALCULATIONS: Submission and Performance Rate One: Females 18-64 Years of Age

Data Completeness=

$$\frac{\text{Performance Met (a}^1=40 \text{ patients)} + \text{Performance Not Met (c}^1=30 \text{ patients)}}{\text{Eligible Population / Denominator (d}^1=80 \text{ patients)}} = \frac{70 \text{ patients}}{80 \text{ patients}} = 87.50\%$$

Performance Rate**=

$$\frac{\text{Performance Met (a}^1= 40 \text{ patients)}}{\text{Data Completeness Numerator (70 patients)}} = \frac{40 \text{ patients}}{70 \text{ patients}} = 57.14\%$$

SAMPLE CALCULATIONS: Submission and Performance Rate Two: Males 18-64 Years of Age

Data Completeness=

$$\frac{\text{Performance Met (a}^2=40 \text{ patients)} + \text{Performance Not Met (c}^2=30 \text{ patients)}}{\text{Eligible Population / Denominator (d}^2=80 \text{ patients)}} = \frac{70 \text{ patients}}{80 \text{ patients}} = 87.50\%$$

Performance Rate**=

$$\frac{\text{Performance Met (a}^2= 40 \text{ patients)}}{\text{Data Completeness Numerator (70 patients)}} = \frac{40 \text{ patients}}{70 \text{ patients}} = 57.14\%$$

SAMPLE CALCULATIONS: Submission and Performance Rate Three: Females ≥ 65 Years of Age

Data Completeness=

$$\frac{\text{Performance Met (a}^3=40 \text{ patients)} + \text{Performance Not Met (c}^3=30 \text{ patients)}}{\text{Eligible Population / Denominator (d}^3=80 \text{ patients)}} = \frac{70 \text{ patients}}{80 \text{ patients}} = 87.50\%$$

Performance Rate**=

$$\frac{\text{Performance Met (a}^3= 40 \text{ patients)}}{\text{Data Completeness Numerator (70 patients)}} = \frac{40 \text{ patients}}{70 \text{ patients}} = 57.14\%$$

SAMPLE CALCULATIONS: Submission and Performance Rate Four: Males ≥ 65 Years of Age

Data Completeness=

$$\frac{\text{Performance Met (a}^4=40 \text{ patients)} + \text{Performance Not Met (c}^4=30 \text{ patients)}}{\text{Eligible Population / Denominator (d}^4=80 \text{ patients)}} = \frac{70 \text{ patients}}{80 \text{ patients}} = 87.50\%$$

Performance Rate**=

$$\frac{\text{Performance Met (a}^4= 40 \text{ patients)}}{\text{Data Completeness Numerator (70 patients)}} = \frac{40 \text{ patients}}{70 \text{ patients}} = 57.14\%$$

SAMPLE CALCULATIONS: Overall Performance Rate****

Data Completeness=

$$\frac{\text{Performance Met (a}^1+a^2+a^3+a^4=160 \text{ patients)} + \text{Performance Not Met (c}^1+c^2+c^3+c^4=120 \text{ patients)}}{\text{Eligible Population / Denominator (d}^1+d^2+d^3+d^4=320 \text{ patients)}} = \frac{280 \text{ patients}}{320 \text{ patients}} = 87.50\%$$

Performance Rate**=

$$\frac{\text{Performance Met (a}^1+a^2+a^3+a^4= 160 \text{ patients)}}{\text{Data Completeness Numerator (280 patients)}} = \frac{160 \text{ patients}}{280 \text{ patients}} = 57.14\%$$

*See the posted Measure Specification for specific coding and instructions to submit this measure.
 ***For the purpose of demonstrating the performance rates for this measure the following will apply:

- a1 = Females less than 65 years of age
- a2 = Males less than 65 years of age
- a3 = Females 65 years of and older
- a4 = Males 65 years of age and older

Those 4 rates will be combined to calculate an overall Data Completeness and Performance Rate
 ****It is anticipated for registry submission that for every performance rate, a data completeness will be submitted. CMS will determine or use the overall data completeness and performance rate.

**A lower calculated performance rate for this measure indicates better clinical care or control.
 NOTE: Submission Frequency: Patient - process