

Quality ID #324: Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Testing in Asymptomatic, Low-Risk Patients
– National Quality Strategy Domain: Efficiency and Cost Reduction
– Meaningful Measure Area: Appropriate Use of Healthcare

2021 COLLECTION TYPE:
MIPS CLINICAL QUALITY MEASURES (CQMS)

MEASURE TYPE:
Efficiency – High Priority

DESCRIPTION:
Percentage of all stress single-photon emission computed tomography (SPECT) myocardial perfusion imaging (MPI), stress echocardiogram (ECHO), cardiac computed tomography angiography (CCTA), and cardiovascular magnetic resonance (CMR) performed in asymptomatic, low coronary heart disease (CHD) risk patients 18 years and older for initial detection and risk assessment

INSTRUCTIONS:
This measure is to be submitted **once per procedure** of cardiac stress imaging (i.e., SPECT, MPI, ECHO, CCTA, and CMR) for patients seen during the performance period. There is no diagnosis associated with this measure. It is anticipated that Merit-based Incentive Payment System (MIPS) eligible clinicians who provide the professional component of diagnostic imaging studies for cardiac stress will submit this measure.

Measure Submission Type:
Measure data may be submitted by individual MIPS eligible clinicians, groups, or third party intermediaries. 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 as allowed by the measure. The quality-data codes listed do not need to be submitted by MIPS eligible clinicians, groups, or third party intermediaries that utilize this modality for submissions; however, these codes may be submitted for those third party intermediaries that utilize Medicare Part B claims data. For more information regarding Application Programming Interface (API), please refer to the Quality Payment Program (QPP) website.

DENOMINATOR:
All instances of stress single-photon emission computed tomography (SPECT) myocardial perfusion imaging (MPI), stress echocardiogram (ECHO), cardiac computed tomography angiography (CCTA), or cardiac magnetic resonance (CMR) performed on patients aged 18 years and older during the performance period

Denominator Criteria (Eligible Cases):
Patients aged ≥ 18 years on date of encounter

AND
Cardiac Stress Imaging Performed – Procedure Codes (CPT): 75559, 75563, 75571, 75572, 75573, 75574, 78451, 78452, 78453, 78454, 78491, 78492, 78494, 93350, 93351

NUMERATOR:
Number of stress SPECT MPI, stress echo, CCTA, or CMR primarily performed for asymptomatic, low CHD risk patients for initial detection and risk assessment

Definition:
Low CHD risk – clinicians should consider the maximum number of available patient factors used to estimate risk based on Framingham (ATP III criteria), typically age, gender, diabetes, smoking status, and use of blood pressure medication, and integrate age appropriate estimates for missing elements, such as LDL or standard blood pressure.

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 NOTE: A lower calculated performance rate for this measure indicates better clinical care or control. This measure is assessing overuse of cardiac stress imaging in low-risk CHD patients. Clinical quality outcome is cardiac stress imaging NOT performed on patient who is asymptomatic or low CHD risk.

Numerator Options:

Performance Met:

Cardiac Stress Imaging Test primarily performed on low CHD risk patient for initial detection and risk assessment (**G8965**)

OR

Performance Not Met:

Cardiac Stress Imaging Test performed on symptomatic or higher than low CHD risk patient or for any reason other than initial detection and risk assessment (**G8966**)

RATIONALE:

Diagnostic testing, such as stress SPECT MPI, stress echocardiography, CCTA, and CMR, is used to detect disease and provide risk assessment used to modify treatment strategies and approaches. Information provided by such testing can initiate, modify and stop further treatments for coronary heart disease (medications and revascularization) which have an impact on patient outcomes. In addition, false positives and false negatives can adversely impact the patient and their treatment outcomes. Lastly, radiation from stress SPECT MPI poses a minimal but still important consideration for patient safety. Ensuring proper patient selection can avoid using resources in patients not expected to benefit from the testing and for which the associated risks would be unnecessary.

CLINICAL RECOMMENDATION STATEMENTS:

2002 Stable Angina Guideline

“Asymptomatic patients with abnormal findings on ambulatory ECG or EBCT who are able to exercise can be evaluated with exercise ECG testing, although the efficacy of exercise ECG testing in asymptomatic patients is not well established. Stress imaging procedures (i.e., either stress myocardial perfusion imaging or stress echocardiography) are generally not indicated in most such patients.”

AUC Indications

2013 ACCF/AHA/ASE/ASNC/HFSA/HRS/SCAI/SCCT/SCMR/STS multimodality appropriate use criteria for the detection and risk assessment of stable ischemic heart disease (J Am Coll Cardiol. 2014 Feb 4;63(4):380-406)

Indication 7: Asymptomatic (Without Symptoms or Ischemic Equivalent): Low global CHD risk: Regardless of ECG interpretability and ability to exercise – Rarely Appropriate

2008 Appropriateness Criteria for Stress Echocardiography Indication 11: Detection of CAD and Risk Assessment: Asymptomatic (without Chest Pain Syndrome or Anginal Equivalent): Low CHD risk (Framingham risk criteria) - Inappropriate (1)

2009 Appropriate Use Criteria for Cardiac Radionuclide Imaging Indication 12: Detection of CAD/Risk Assessment Without Ischemic Equivalent: Asymptomatic: Low CHD risk (ATP III risk criteria) - Inappropriate (1)

2006 Appropriateness Criteria for CCT and CMR Indication 10 - Detection of CAD: Asymptomatic (Use of CCTA) (Without Chest Pain Syndrome): Asymptomatic: Low CHD risk (Framingham risk criteria) - Inappropriate (1)

2002 Chronic Stable Angina Guideline Class III

Recommendations for Cardiac Stress Imaging as the Initial Test for Diagnosis in Asymptomatic Patients

1. Exercise or dobutamine echocardiography in asymptomatic patients with left bundle-branch block. (Level of Evidence: C)
2. Exercise myocardial perfusion imaging, exercise echocardiography, adenosine or dipyridamole myocardial perfusion imaging, or dobutamine echocardiography as the initial stress test in an asymptomatic patient with a normal rest ECG who is not taking digoxin. (Level of Evidence: C)
3. Adenosine or dipyridamole myocardial perfusion imaging or dobutamine echocardiography in asymptomatic patients who are able to exercise and do not have left bundle-branch block or electronically paced ventricular rhythm. (Level of Evidence: C)

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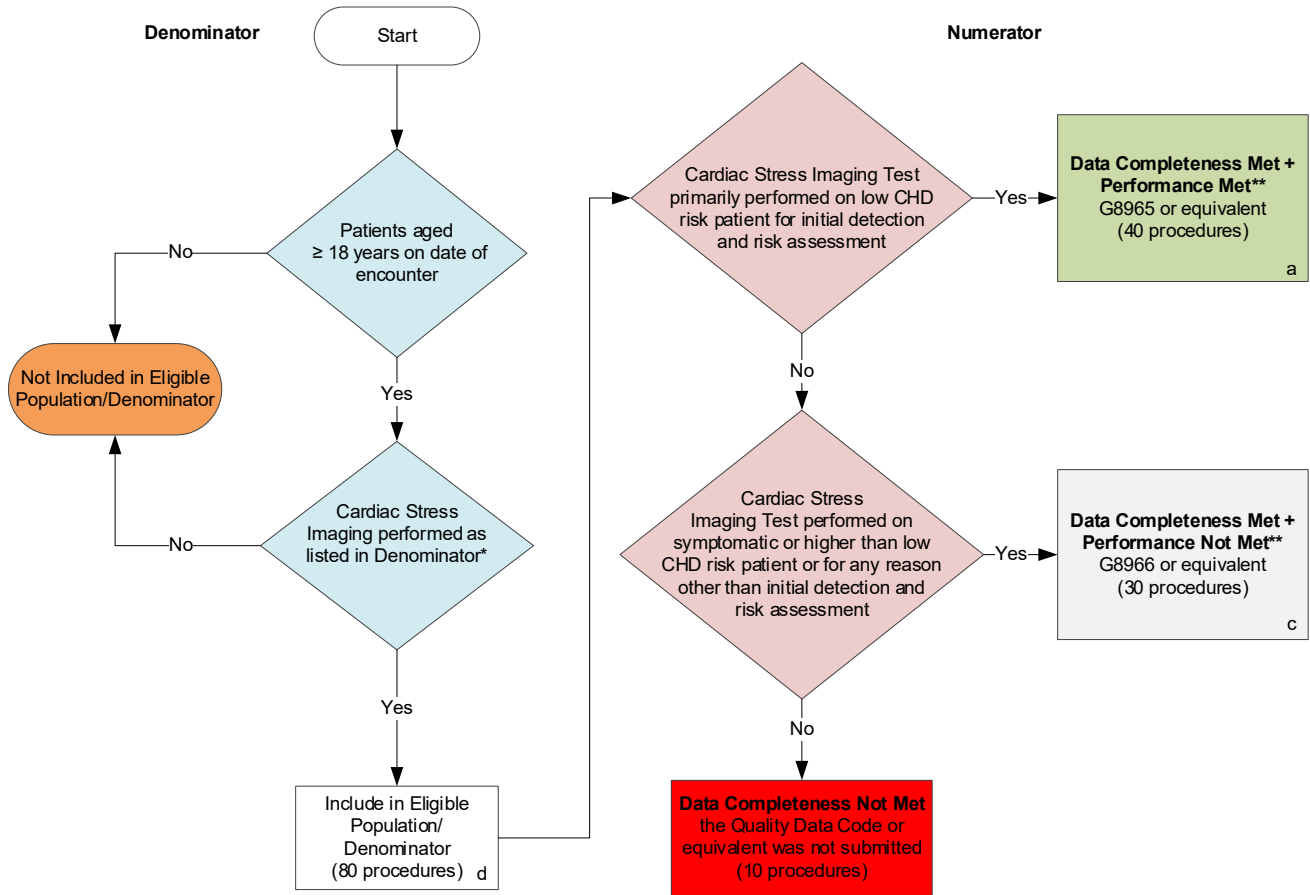
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**2021 Clinical Quality Measure Flow for Quality ID #324:
Cardiac Stress Imaging Not Meeting Appropriate Use Criteria:
Testing in Asymptomatic, Low-Risk Patients**

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



SAMPLE CALCULATIONS

Data Completeness=

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

Performance Rate=**

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

* 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 control or care.
 NOTE: Submission Frequency: Procedure

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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. v5

**2021 Clinical Quality Measure Flow Narrative for Quality ID #324:
Cardiac Stress Imaging Not Meeting Appropriate Use Criteria:
Testing in Asymptomatic, Low-Risk Patients**

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1. Start with Denominator
2. Check *Patients aged greater than or equal to 18 years on date of encounter*.
 - a. If *Patients aged greater than or equal to 18 years on date of encounter* equals No, do not include in *Eligible Population/Denominator*. Stop Processing.
 - b. If *Patients aged greater than or equal to 18 years on date of encounter* equals Yes, proceed to check *Cardiac Stress Imaging performed as listed in Denominator**.
3. Check *Cardiac Stress Imaging performed as listed in Denominator**:
 - a. If *Cardiac Stress Imaging performed as listed in Denominator** equals No, do not include in *Eligible Population/Denominator*. Stop Processing.
 - b. If *Cardiac Stress Imaging performed as listed in Denominator** equals Yes, include in *Eligible Population/Denominator*.
4. Denominator Population:
 - Denominator Population is all Eligible Procedures in the Denominator. Denominator is represented as Denominator in the Sample Calculation listed at the end of this document. Letter d equals 80 procedures in the Sample Calculation.
5. Start Numerator
6. Check *Cardiac Stress Imaging Test primarily performed on low CHD risk patient for initial detection and risk assessment*:
 - a. If *Cardiac Stress Imaging Test primarily performed on low CHD risk patient for initial detection and risk assessment* 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 procedures in the Sample Calculation.
 - b. If *Cardiac Stress Imaging Test primarily performed on low CHD risk patient for initial detection and risk assessment* equals No, proceed to check *Cardiac Stress Imaging Test performed on symptomatic or higher than low CHD risk patient or for any reason other than initial detection and risk assessment*.
7. Check *Cardiac Stress Imaging Test performed on symptomatic or higher than low CHD risk patient or for any reason other than initial detection and risk assessment*:
 - a. If *Cardiac Stress Imaging Test performed on symptomatic or higher than low CHD risk patient or for any reason other than initial detection and risk assessment* equals Yes, include in *Data Completeness Met and Performance Not Met*.

- *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 30 procedures in the Sample Calculation.
- b. If *Cardiac Stress Imaging Test performed on symptomatic or higher than low CHD risk patient or for any reason other than initial detection and risk assessment* equals No, proceed to check *Data Completeness Not Met*.

8. Check *Data Completeness Not Met*:

- If *Data Completeness Not Met*, the Quality Data Code or equivalent was not submitted. 10 procedures have been subtracted from the Data Completeness Numerator in the Sample Calculation.

Sample Calculations

Data Completeness equals Performance Met (a equals 40 procedures) plus Performance Not Met (c equals 30 procedures) divided by Eligible Population/Denominator (d equals 80 procedures). All equals 70 procedures divided by 80 procedures. All equals 87.50 percent.

Performance Rate equals Performance Met (a equals 40 procedures) divided by Data Completeness Numerator (70 procedures). All equals 40 procedures divided by 70 procedures. All equals 57.14 percent.

*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 control or care.

NOTE: Submission Frequency: Procedure

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.