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Billing

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Cardiac Markers in the Early Diagnosis and Management of Patients with Acute Coronary Syndrome

Adjudication Guideline

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Approved by:
Daman

Responsible:
Medical Standards & Research

Related Adjudication Guidelines:

Abstract

For Members

Chest pain comes in many varieties, ranging from a sharp stab to a dull ache. Some chest pain is described as crushing or burning. In certain cases, the pain travels up the neck, into the jaw, and then radiates through to the back or down one or both arms. Many different problems can cause chest pain. The most life-threatening ones involve the heart (Acute coronary syndrome) or lungs.

For Medical Professionals

This adjudication rule defines the coverage for cardiac marker tests in diagnosis and risk stratification of patient with chest pain and suspected acute coronary syndrome (ACS).

Scope

The scope of this adjudication rule highlights the coverage for Cardiac marker tests in diagnosis and risk stratification of patients with chest pain and suspected acute coronary syndrome (ACS) for health insurance plans administered by Daman subject to policy terms and conditions.

Adjudication Policy

Eligibility / Coverage Criteria

1. Medical Indications:

Cardiac markers are used in the diagnosis and risk stratification of patients with chest pain and suspected acute coronary syndrome (ACS) [1.]

In patients with suspected acute coronary syndrome (ACS), the following laboratory studies are performed to confirm the diagnosis:

a) Troponins: The troponins are regulatory proteins found in skeletal and cardiac muscle Cardiac troponin are used in the diagnosis and risk stratification of patients with chest pain and suspected acute coronary syndrome (ACS). The cardiac troponins, in particular, have become the cardiac markers of choice for patients with ACS. Indeed, cardiac troponin is central to the definition of acute myocardial infarction (MI) in the consensus guidelines from the European Society of Cardiology (ESC) and the American College of Cardiology (ACC): These guidelines recommend that cardiac biomarkers should be measured at presentation in patients with suspected MI, and that the only biomarker that is recommended to be used for the diagnosis of acute MI at this time is cardiac troponin due to its superior sensitivity and accuracy. [1,2]

b) Creatine Kinase–MB: Prior to the introduction of cardiac troponins, the biochemical marker of choice for the diagnosis of acute MI was the CK-MB iso-enzyme. The criterion most commonly used for the diagnosis of acute MI was 2 serial elevations above the diagnostic cut-off level or a single result more than twice the upper limit of normal. Although CK-MB is more concentrated in the myocardium, it also exists in skeletal muscle and false-positive elevations occur in a number of clinical settings, including trauma, heavy exertion, and myopathy.
With the availability of cardiac troponin, CK-MB, myoglobin and other biomarkers are no longer necessary. [1,2]

c) Myoglobin: Myoglobin is a heme protein found in skeletal and cardiac muscle that has attracted considerable interest as an early marker of MI. With the adoption of a troponin standard for acute MI in the ACC/ESC definition, the sensitivity of myoglobin for acute MI is substantially reduced. This significantly diminishes its utility, and a number of studies have indicated that contemporary cardiac troponin assays render the use of myoglobin measurements unnecessary.[1,2]

The below table reflects comparative efficacy of cardiac biomarkers[3]

Test	Sensitivity*	Specificity**
Troponins I	100%	96.3%
CK-MB	88.2%	93.2%

**Sensitivity- reflects the ability of the test to correctly identify patients with conditions being tested for, therefore test with high sensitivity reduces the likelihood of a false negative results.*
*** Specificity - reflects the ability of the test to correctly identify patients without condition, therefore a test with high specificity reduces the likelihood of a false positive result.*

2. **Frequency of retesting:**

   In patients presenting very early (e.g. Within 1 h from chest pain onset), the second cardiac troponin level should be obtained at 3 h, due to the time dependency of troponin release; as late increases in cardiac troponin have been described in 1% of patients, serial cardiac troponin testing should be pursued if the clinical suspicion remains high or whenever the patient develops recurrent chest pain.[1,2]

3. **Billing:**

   As per AHA (American Heart Association) up to date release of the Guideline for the Management of Patients with Non–ST-Elevation Acute Coronary Syndromes [2:] With availability of contemporary troponin assays, creatine kinase myocardial iso-enzyme (CK-MB) and myoglobin are not useful for diagnosis of ACS**.** [1,2] *(Level of Evidence: A*) Class III: No Benefit

   Accordingly, Daman has revised its position on the coverage of both tests and will no longer cover CK-MB and Myoglobin for the diagnosis and risk stratification of patients with chest pain and suspected acute coronary syndrome (ACS) for ALL health insurance plans administered by Daman.

Requirements for Coverage

ICD and CPT codes must be coded to the highest level of specificity.

Non-Coverage

Daman has revised its position on the coverage of both tests and will no longer cover CK-MB and Myoglobin for the diagnosis and risk stratification of patients with chest pain and suspected acute coronary syndrome (ACS) for ALL health insurance plans administered by Daman.

Payment and Coding Rules

Please apply HAAD payment rules and regulations and relevant coding manuals for ICD, CPT, etc.

Denial codes

Code	Code description
MNEC-003	Service is not clinically indicated based on good clinical practice
MNEC-004	Service is not clinically indicated based on good clinical practice, without additional supporting diagnoses/activities

Appendices

A. References

1. https://academic.oup.com/eurheartj/article/37/3/267/2466099/2015-ESC-Guidelines-for-the-management-of-acute
2. http://circ.ahajournals.org/content/130/25/e344
3. https://www.ncbi.nlm.nih.gov/pubmed/9924168

B. Revision History

Date	Change(s)
30/08/2017	Release V1.0