Cardiac Disease Screening – Lipid Profile

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Developed By: Medical Necessity Criteria Committee

I. Description

The traditional risk factors for cardiovascular disease include smoking, hypertension, diabetes, obesity, age, family history, lipid abnormalities and sedentary lifestyle. Nearly half of the patients that present-with a myocardial infarction do not have these classic risk factors. This finding has directed research to look for other risk factors that may be responsible for coronary artery disease and to develop screening tests to predict future coronary events in healthy individuals. Cholesterol screening consists of a lipid profile which includes total cholesterol, high density lipoprotein cholesterol, low density lipoprotein cholesterol, and triglycerides are covered for members with coverage for preventative services. Several nontraditional markers of cardiovascular risk have been developed to improve identification of patients at high risk. These include the following laboratory tests:

High Sensitivity C-reactive protein (hs-CRP): It is thought that certain markers of inflammation may indicate the development of atherosclerosis. High sensitivity C-reactive protein is a systemic marker of inflammation that has been used as a screening test for assessing cardiovascular disease risk.

Homocysteine: is an amino acid normally found in the body. Studies suggest that high blood levels of homocysteine may increase an individual's chance of developing heart disease, stroke and damage to arteries.

Apolipoprotein A-I, LDL gradient gel electrophoresis, and Lipoprotein (a) immunoassay: These tests are performed to help determine coronary heart disease risk and to guide drug and diet therapy in patients with established coronary artery disease.

Apolipoprotein B: is thought to be a useful risk assessment tool in patients with normal LDL who have a high family risk for premature coronary artery disease. However, apo B assays have not been fully standardized and there is no consensus on predictive or treatment value. *Apolipoprotein E* polymorphisms have functional effects on lipoprotein metabolism and have been studied in disorders associated with elevated cholesterol levels and lipid derangements. Research investigators have found that the apo E genotype yields poor predictive values when screening for clinically defined atherosclerosis.

LDL subspecies: Larger and smaller low-density lipoprotein (LDL) particle size may be associated with coronary heart disease. In addition, nearly half of patients with coronary atherosclerotic disease have dense LDL particles. When present, dense LDL greatly increases the risk of coronary disease.

HDL subspecies: High-density lipoprotein (HDL) is known as the "good cholesterol", however, not all HDL is beneficial. HDL subfractions (lipoprotein AI (LpAI) and lipoprotein AI/AII (LpAI/AII) and/or HDL3 and HDL2) have also been used for risk prediction. However, studies have not shown superiority of HDL subspecies over HDL cholesterol in CHD risk assessments.

Angiotensin gene (AGT) or CardiaRisk: This test analyzes angiotensin gene polymorphisms which have been associated with cardiovascular disease risk and some forms of hypertension. Certain AGT polymorphisms have been associated with the responsiveness of blood pressure to ACE inhibitor therapy and sodium reduction. Therefore, analysis of the AGT gene may be beneficial in helping to predict how patients will respond to certain antihypertensive interventions. CardiaRisk is a lab test done at Myriad Genetics Laboratories that analyzes the angiotensinogen gene.

II. Criteria: CWQI HCS-0015

A. Moda Health covers the following tests for **preventive cholesterol screening** when the **member has benefits available**: total cholesterol, high density lipoprotein cholesterol (HDL), low density lipoprotein cholesterol (LDL), VLDL (very low-density lipoprotein), and triglycerides.
B. Moda Health will cover high-sensitivity C-reactive protein (hs-CRP) as a **medical diagnostic only**. Hs-CRP is considered investigational and will not be covered when performed as a routine screening test.
C. Moda Health will allow **limited coverage** of specific tests for the following:
    a. hs-CRP will be covered for young individuals who have unexplained coronary artery disease and lack traditional risk factors.
D. Apolipoprotein B will be covered for members undergoing management of lipoprotein abnormalities **and** who have **1 or more** of the following:
    a. Diabetes; or
    b. Coronary heart disease; or
    c. Member is a smoker; or
    d. Member has a family history of premature coronary heart disease
E. Other laboratory tests for assessing coronary heart disease are considered investigational for screening, diagnosing, or managing coronary heart disease.

III. Information Submitted with the Prior Authorization Request

1. Documentation from the ordering physician supporting one of the above listed indications.

2. When performed as a routine screening, these tests are considered investigational and will not be covered. Prevailing medical literature does not support the use of these tests for screening of coronary heart disease.

IV. CPT or HCPC codes covered

Codes	Description
80061	Lipid panel
82172	Apolipoprotein, each
82465	Cholesterol, serum or whole blood, total
83718	Lipoprotein, direct measurement; high density cholesterol (HDL cholesterol)
83721	Lipoprotein, direct measurement; LDL cholesterol
84478	Triglycerides
86141	C-reactive protein, high sensitivity (hs-CRP)
83722	Lipoprotein, direct measurement; small dense LDL cholesterol

V. CPT or HCPC codes not covered

Codes	Description
83704	Lipoprotein, blood; quantitation of lipoprotein particle numbers and lipoprotein particle subclasses

VI. Annual Review History

Review Date	Revisions	Effective Date
03/2013	Annual Review: Added table with review date, revisions, and effective date.	04/03/2013
06/2014	Annual Review: No change	06/2014
9/2015	Removed ICD-9 codes, added ICD-10	9/26/2015
9/2016	Annual Review: Minor change – added age for Apolipoprotein B.	9/28/2016
08/2017	Annual Review: Included itemized list of codes approved for Homocysteine	08/23/2017
02/27/2019	Annual Review: Include criteria for homocysteine testing	03/01/2019
01/22/2020	Annual Review: Codes updated	02/01/2020
02/24/2021	Annual Review: No content change	03/01/2021
02/23/2022	Annual Review: No changes	03/01/2022
02/22/2023	Annual Review: requirements for Lipoprotein and homocysteine removed	03/01/2023
02/28/2024	Annual Review: update-Lipoprotein a, homocysteine testing requirements and codes removed	03/01/2024
02/26/2025	Annual Review: No changes	03/01/2025

VII. References

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19. Physician Advisors

Appendix 1 – Applicable ICD-10 codes approved for Homocysteine test

Codes	Description
D51.0-D51.9	Vitamin B12 deficiency anemia
D81.818	Other biotin-dependent carboxylase deficiency
D81.819	Biotin-dependent carboxylase deficiency, unspecified
E53.8	Deficiency of other specified group B vitamins
E72.10 - E72.11; E72.19	Disturbances of Sulphur-bearing amino-acid metabolism (not covered for management of 5, 10-methhylenetetrahydrofolate reductase [MTHFR] abnormalities)
I26.01 – I26.99	Pulmonary embolism
I81	Portal vein thrombosis
I82.0 – I82.91	Other venous embolism and thrombosis
T81.718D	Embolism of cardiac prosthetic devices, implants and grafts, sequelae
T82.818D	Embolism of vascular prosthetic devices, implants and grafts, subsequent encounter
T82.817A	Embolism of cardiac prosthetic devices, implants and grafts, initial encounter
I74.01	Saddle embolus of abdominal aorta
I74.19	Embolism and thrombosis of other parts of aorta
I74.10	Embolism and thrombosis of unspecified parts of aorta
I74.09	Other arterial embolism and thrombosis of abdominal aorta
I74.11	Embolism and thrombosis of thoracic aorta
I74.2	Embolism and thrombosis of arteries of the upper extremities
I74.4	Embolism and thrombosis of arteries of extremities, unspecified
I74.3	Embolism and thrombosis of arteries of the lower extremities
I74.5	Embolism and thrombosis of iliac artery
I74.8	Embolism and thrombosis of other arteries
I74.9	Embolism and thrombosis of unspecified artery

Appendix 2 – Centers for Medicare and Medicaid Services (CMS)

Medicare coverage for outpatient (Part B) drugs is outlined in the Medicare Benefit Policy Manual (Pub. 100-2), Chapter 15, §50 Drugs and Biologicals. In addition, National Coverage Determination (NCD) and Local Coverage Determinations (LCDs) may exist and compliance with these policies is required where applicable. They can be found at: http://www.cms.gov/medicare-coverage-database/search/advanced-search.aspx. Additional indications may be covered at the discretion of the health plan.

Medicare Part B Covered Diagnosis Codes (applicable to existing NCD/LCD):

Jurisdiction(s): 5, 8	NCD/LCD Document (s):

NCD/LCD Document (s):

Medicare Part B Administrative Contractor (MAC) Jurisdictions		
Jurisdiction	Applicable State/US Territory	Contractor
F (2 & 3)	AK, WA, OR, ID, ND, SD, MT, WY, UT, AZ	Noridian Healthcare Solutions, LLC