



Coronary Artery and Heart Disease

OVERVIEW

Heart and blood vessel disease — cardiovascular disease, also called heart disease — includes numerous problems, many of which are related to a process called atherosclerosis. Atherosclerosis is a condition that develops when a substance called plaque builds up in the walls of the arteries. This buildup narrows the arteries, making it harder for blood to flow through. If a blood clot forms, it can stop the blood flow. These diseases include **Coronary Heart Disease, Cerebrovascular Disease, Peripheral Artery and Aortic Atherosclerosis**. As HTN continues, the arteries thicken and become less flexible. Cholesterol deposits in the arteries further narrow the ability of blood flow easily. To compensate for the additional force needed to pump blood, the heart gets thicker and enlarges. Some of the risk factors that can lead to cardiovascular disease include:

- Smoking
- Diabetes
- Genetics
- Hypertension
- Congenital heart conditions
- Arterial stiffness and/or calcification
- Coronary artery calcification
- Abnormal ECG such as ST depression
- Left ventricular hypertrophy (LVH)*
- Atherosclerotic vessels due to high lipids in the blood
- Collagen vascular disease (such as Lupus or Scleroderma)

* The heart uses electrical impulses to generate a heartbeat. This electrical activity can be measured using an electrocardiogram (ECG). When the heart is enlarged due to ventricular hypertrophy, the path that the electrical impulse takes is affected. This effect can be seen on an ECG.

GUIDELINE HIERARCHY

CPGs are updated every two years or as necessary due to updates made to the United States Preventive Services Task Force (USPSTF), the American College of Cardiology (ACC), the American Heart Association (AHA), the American College of Cardiology Foundation (ACCF), and the Institute for Clinical Systems Improvement (ICSI) guidelines. When there are differing opinions noted by national organizations, WellCare will default to the member's benefit structure as deemed by state contracts and Medicaid / Medicare regulations. If there is no specific language pertaining to coronary artery and heart disease, WellCare will default (in order) to the following:

- National Committee for Quality Assurance (NCQA);
- USPSTF, National Quality Strategy (NQS), Agency for Healthcare Research and Quality (AHRQ);
- Specialty associations, colleges, societies, etc. (e.g., American Academy of Family Physicians, American Congress of Obstetricians and Gynecologists, American Cancer Society, etc.).

Links to websites within the CPGs are provided for the convenience of Providers. Listings do not imply endorsement by WellCare of the information contained on these websites.

NOTE: All links are current and accessible at the time of MPC approval.

WellCare aligns with the USPSTF, ACC, AHA, ACCF, and the ICSI on the topic of coronary artery and heart disease. The following are highlights from their recommendations and guidelines.

USPSTF¹

WellCare aligns with recommendations made by the USPSTF; highlights are noted below:

- **Aspirin for the Prevention of Cardiovascular Disease (2009).** Recommends the use of aspirin for men age 45 to 79 years when the potential benefit due to a reduction in myocardial infarctions outweighs the potential harm due to an increase in gastrointestinal hemorrhage. See the Clinical Considerations section for discussion of benefits and harms. (Grade A).

The USPSTF recommends the use of aspirin for women age 55 to 79 years when the potential benefit of a reduction in ischemic strokes outweighs the potential harm of an increase in gastrointestinal hemorrhage. See the Clinical Considerations section for discussion of benefits and harms. (Grade A).

The USPSTF recommends against the use of aspirin for stroke prevention in women younger than 55 years and for myocardial infarction prevention in men younger than 45 years. The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined. (Grade I).

- **Carotid Artery Stenosis: Screening (2014).** Recommends against screening for asymptomatic carotid artery stenosis in the general adult population. (Grade D).
- **Coronary Heart Disease: Screening Using Non-Traditional Risk Factors (2009).** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of using the nontraditional risk factors studied to screen asymptomatic men and women with no history of CHD to prevent CHD events. (Grade I).*
- **Coronary Heart Disease: Screening with Electrocardiography (2012).** Recommends against screening with resting or exercise electrocardiography (ECG) for the prediction of coronary heart disease (CHD) events in asymptomatic adults at low risk for CHD events. (Grade D).

The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening with resting or exercise ECG for the prediction of CHD events in asymptomatic adults at intermediate or high risk for CHD events. (Grade I).

- **Healthful Diet and Physical Activity for Cardiovascular Disease Prevention in Adults: Behavioral Counseling (2012).** Although the correlation among healthful diet, physical activity, and the incidence of cardiovascular disease is strong, existing evidence indicates that the health benefit of initiating behavioral counseling in the primary care setting to promote a healthful diet and physical activity is small. Clinicians may choose to selectively counsel patients rather than incorporate counseling into the care of all adults in the general population. (Grade C).
- **Healthful Diet and Physical Activity for Cardiovascular Disease Prevention in Adults With Cardiovascular Risk Factors: Behavioral Counseling (2014).** The USPSTF recommends offering or referring adults who are overweight or obese and have additional cardiovascular disease (CVD) risk factors to intensive behavioral counseling interventions to promote a healthful diet and physical activity for CVD prevention. (Grade B).
- **Lipid Disorders in Adults (Cholesterol, Dyslipidemia): Screening (2008).**

Summary of Recommendations - Screening Men

Strongly recommends screening men aged 35 and older for lipid disorders. (Grade A).

Recommends screening men aged 20-35 for lipid disorders if they are at increased risk for coronary heart disease. (Grade B).

Summary of Recommendations - Screening Women at Increased Risk

Strongly recommends screening women aged 45 and older for lipid disorders if they are at increased risk for coronary heart disease. (Grade A).

Recommends screening women aged 20-45 for lipid disorders if they are at increased risk for coronary heart disease. (Grade B).

Summary of Recommendations - Screening Young Men and All Women NOT at Increased Risk

The USPSTF makes no recommendation for or against routine screening for lipid disorders in men aged 20 to 35, or in women aged 20 and older who are not at increased risk for coronary heart disease. (Grade C).

- **Peripheral Arterial Disease (PAD) and CVD in Adults: Risk Assessment with Ankle Brachial Index (2013).** The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for peripheral artery disease (PAD) and cardiovascular disease (CVD) risk assessment with the ankle-brachial index (ABI) in adults. (Grade I).
- **Vitamin Supplementation to Prevent Cancer and Cardiovascular Disease (CVD): Counseling (2014).** For the use of β -carotene or Vitamin E for the prevention of cardiovascular disease or cancer. (Grade D). In addition, the USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the use of multivitamins for the prevention of cardiovascular disease or cancer. (Grade I). The USPSTF also concludes that the current evidence is insufficient to assess the balance of benefits and harms of the use of single- or paired-nutrient supplements (except β -carotene and vitamin E) for the prevention of cardiovascular disease or cancer. (Grade I).

* At time of publication this recommendation was in review by the USPSTF.

CARDIOLOGY BASED ORGANIZATIONS^{2,3,4}

In addition to the USPSTF recommendations, WellCare adopts the following guidelines:

- American College of Cardiology (ACC) and the American Heart Association (AHA)
ACC/AHA Prevention Guideline on the Assessment of Cardiovascular Risk – A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (2013)
Available at http://circ.ahajournals.org/content/129/25_suppl_2/S49.short?rss=1&ssource=mfr
- AHA and ACC Task Force on Practice Guidelines
AHA/ACC Guideline for the Management of Patients With Valvular Heart Disease: Executive Summary (2014)
Available at <http://circ.ahajournals.org/content/129/23/2440.full>
- AHA and the American College of Cardiology Foundation (ACCF)
Secondary Prevention and Risk Reduction Therapy for Patients With Coronary and Other Atherosclerotic Vascular Disease (AVD) (2011)
Available at <http://content.onlinejacc.org/article.aspx?articleid=1147807>

INSTITUTE FOR CLINICAL SYSTEMS IMPROVEMENT (ICSI)⁵

WellCare also adheres to the 2013 health care guideline set forth by the Institute for Clinical Systems Improvement (ICSI). The guideline addresses adults with stable coronary artery disease presenting with:

- Previously diagnosed coronary artery disease without angina, or symptom complex that has remained stable for at least 60 days;
- No change in frequency, duration, precipitating causes or ease of relief of angina for at least 60 days;
- No evidence of recent myocardial damage.

Aims

1. Increase the percentage of patients age 18 years and older with a diagnosis of stable coronary artery disease (SCAD) who are prescribed aspirin and antiatherosclerotic medications.
2. Increase the percentage of patients age 18 years and older with a diagnosis of stable coronary artery disease who understand the self-management of their condition.
3. Increase the percentage of patients age 18 years and older with a diagnosis of stable coronary artery disease who receive education and an intervention for modifiable risk factors.

4. Increase the use of angiotensin-converting enzyme (ACE) inhibitors or angiotensin II receptor blockers (ARBs) in patients with stable coronary artery disease with systolic CHF (ejection fraction less than or equal to 40%), including those patients with a comorbidity diagnosis of chronic kidney disease and/or diabetes mellitus.
5. Increase appropriate risk assessment and stress imaging for stable coronary artery disease patients to determine risk stratification prior to decisions on medical therapy and revascularization.

Clinical Highlights

- Prescribe aspirin in patients with stable coronary artery disease if there are no medical contraindications.
- Evaluate and treat the modifiable risk factors, which include smoking, sedentary activity level, depression, hyperlipidemia, obesity, hypertension and diabetes.
- Patients with chronic stable coronary artery disease should be on statin therapy regardless of their lipid levels unless contraindicated.
- Perform prognostic testing in patients whose risk determination remains unclear. This may precede or follow an initial course of pharmacologic therapy.
- Refer the patient for cardiovascular consultation when clinical assessment indicates the patient is at high risk for adverse events, the non-invasive imaging study or electrocardiography indicates the patient is at high risk for an adverse event, or medical treatment is ineffective.
- For relief of angina, prescribe beta-blockers as first-line medication. If beta-blockers are contraindicated, nitrates are the preferred alternative. Calcium channel blockers may be an alternative medication if the patient is unable to take beta-blockers or nitrates.

The full guideline can be accessed at https://www.icsi.org/_asset/t6bh6a/SCAD.pdf

CARE MANAGEMENT OVERVIEW

CAD occurs in the arteries of the heart and is a result of thickening of the coronary arteries and/or clogging of the arteries such that blood flow to the heart is reduced. This reduction in blood flow can lead to damage of the heart muscle and in the case of complete blockage, death of heart muscles leading to heart stoppage. Therapies include:

- Stenting of affected arteries
- Bypass graft surgery
- Aspirin
- Blood pressure medication
- Exercise during rehabilitation
- Medications to lower cholesterol

Behavioral Health Aspects of Patients with CAD

Up to 15 percent of patients with cardiovascular disease and up to 20 percent of patients who have undergone coronary artery bypass graft (CABG) surgery experience major depression. Unmanaged stress can lead to high blood pressure, arterial damage, irregular heart rhythms and a weakened immune system. Patients with depression have been shown to have increased platelet reactivity, decreased heart variability and increased pro-inflammatory markers (such as C-reactive protein or CRP), which are all risk factors for cardiovascular disease. For people with heart disease, depression can increase the risk of an adverse cardiac event such as a heart attack or blood clots. For those who do not have heart disease, depression can also increase the risk of a heart attack and development of CAD.

- **Recovery.** During recovery from cardiac surgery, depression can intensify pain, worsen fatigue and sluggishness, or cause a person to withdraw into social isolation. Patients who have had CABG and have untreated depression after surgery also have increased morbidity and mortality.
- **Readmission.** Patients with heart failure and depression have an increased risk of being readmitted to the hospital, and also have an increased mortality risk.
- **Health Status.** Patients with heart disease and depression also perceive a poorer health status according to Quality of Life (QoL) studies. Furthermore, heart disease patients with depression have worse treadmill exercise and medication adherence than that of patients with heart disease who do not have depression.
- **Lifestyle Habits.** Negative habits are associated with depression such as smoking, excessive alcohol

consumption, lack of exercise, poor diet and lack of social support, interfere with the treatment for heart disease.

Risk Factors That Lead to Death Within Six Months of an Myocardial Infarction (MI)

Certain risk factors increase a patient's risk of death within six months of an MI diagnosis. These include:

- 0.37 times more likely by being socially isolated
- 0.76 times more likely with less than eight years of education
- 2.16 times more likely by smoking daily
- 5.27 times more likely with a previous MI
- 5.47 times more likely if diagnosed with depression (more than twice the risk of continuing to smoke cigarettes)

Depression in Cardiac Patients

The Glassman SADHEART Trial is designed primarily to evaluate the cardiovascular safety of sertraline in patients with major depressive disorder after hospitalization for MI or unstable angina. No evidence of harm was found; sertraline was indistinguishable from placebo across all surrogate measures of cardiovascular safety. Treatment was not associated with any change in LVEF, blood pressure, heart rate, arrhythmias, or SDNN on 24-hour ambulatory ECGs, with QTc prolongation, or with any other ECG parameters. Furthermore, though not statistically significant, the incidence of severe cardiac events, the gold standard for cardiac safety, was numerically lower among patients receiving sertraline than among those receiving placebo. Despite the limited number of these "more severe" patients, sertraline was found to be robustly superior to placebo using rating scales for depression, CGI-I and HAM-D." In short, patients benefited from treatment of their depression with sertraline (Zoloft®)

Anxiety in Cardiac Patients

Approximately 20% of all patients who arrive at the emergency department with chest pain meet criteria for panic disorder. In ambulatory cardiology settings, the rates of panic disorder are even higher. This population has:

- Lower rates of panic disorder diagnosis
- Higher number of medical procedures and costs

Anxiety commonly occurs and may be associated with atypical chest pain and nervousness. Acute and chronic anxiety increases an individual's risk of Sudden Coronary Death (SCD) and Coronary Artery Disease (CAD).

About 50% of patients with an acute MI and 40% of those who undergo CABG or Cardiac Stent experience abnormally high anxiety. Anxiety peaks in the first 2 days then drops slowly, but if it does not drop within the first week, it will likely be persistent a year later. About 10%-15% of outpatients with pacemakers and Automatic Implantable Cardiac Defibrillators (AICD) have elevated levels of anxiety, and the rate goes up when the AICD discharges frequently.

The following screening tools are available on the Substance Abuse and Mental Health Services Administration (SAMHSA) website at <http://www.integration.samhsa.gov/clinical-practice/screening-tools>:

- **PHQ-9** (also available in Spanish, as well as in a modified version for adolescents)
- **GAD – 7 Anxiety Screening Tool**

Posttraumatic Stress Disorder

Of those with an MI, 8%-16% will develop PTSD. Similar rates of PTSD occur in those patients who undergo a CABG procedure. Although patients admitted for other severely traumatic injuries also develop PTSD, the PTSD rates are even higher in the cardiac patients.

HEDIS AND STAR MEASURES

CMS has published the following metrics related to coronary artery disease:

Cardiovascular Care – Cholesterol Screening. Members with heart disease should have an annual LDL ("bad") cholesterol test.

Medication Adherence for Cholesterol (Statins). Ensuring member medication adherence is important. Talk with members about how they can remember to take their medication as directed.

Diabetes Care – Cholesterol Screening. Members with diabetes should have an annual LDL (“bad”) cholesterol test.

Diabetes Care – Cholesterol Controlled. Members with diabetes should have an annual cholesterol test showing an acceptable level of “bad” (LDL) cholesterol (or less than 100).

NCQA has published the following standard metrics related to coronary artery disease:

Controlling High Blood Pressure. Members 18–85 years of age who have a diagnosis of hypertension (HTN) and whose BP was adequately controlled during the previous with a target of:

- 18–59 years of age whose BP was <140/90 mm Hg
- 60–85 years of age with a diagnosis of diabetes whose BP was <140/90 mm Hg
- 60–85 years of age without a diagnosis of diabetes whose BP was <150/90 mm Hg

Persistence of Beta-Blocker Treatment After a Heart Attack. Members 18 years of age and older hospitalized and discharged with a diagnosis of AMI should receive persistent beta-blocker treatment for six months after discharge.

RELATED CLINICAL PRACTICE GUIDELINES

In addition to the information contained in this document, please reference the following CPGs: *Cholesterol Management (HS-1005)*, *Congestive Heart Failure (HS-1003)*, and *Hypertension (HS-1010)*.

REFERENCES

1. USPSTF recommendations. United States Preventative Services Task Force Web site. <http://www.uspreventiveservicestaskforce.org>. Accessed March 11, 2015.
2. American College of Cardiology and the American Heart Association. ACC/AHA prevention guideline on the assessment of cardiovascular risk – a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. http://circ.ahajournals.org/content/129/25_suppl_2/S49.short?rss=1&ssource=mfr. Published 2013. Accessed December 8, 2015.
3. American Heart Association and the American College of Cardiology Task Force on Practice Guidelines. AHA/ACC guideline for the management of patients with valvular heart disease: executive summary. <http://circ.ahajournals.org/content/129/23/2440.full>. Published 2014. Accessed December 8, 2015.
4. American Heart Association and the American College of Cardiology Foundation. Secondary prevention and risk reduction therapy for patients with coronary and other atherosclerotic vascular disease. <http://content.onlinejacc.org/article.aspx?articleid=1147807>. Published 2011. Accessed December 8, 2015.
5. Coronary artery disease, stable. Institute for Clinical Systems Improvement Web site. https://www.icsi.org/_asset/t6bh6a/SCAD.pdf. Published 2013. Accessed January 22, 2015.

LEGAL DISCLAIMER

The Clinical Coverage Guideline is intended to supplement certain standard WellCare benefit plans. The terms of a member's particular Benefit Plan, Evidence of Coverage, Certificate of Coverage, etc., may differ significantly from this Coverage Position. For example, a member's benefit plan may contain specific exclusions related to the topic addressed in this Clinical Coverage Guideline. When a conflict exists between the two documents, the Member's Benefit Plan always supersedes the information contained in the Clinical Coverage Guideline. Additionally, Clinical Coverage Guidelines relate exclusively to the administration of health benefit plans and are NOT recommendations for treatment, nor should they be used as treatment guidelines. The application of the Clinical Coverage Guideline is subject to the benefit determinations set forth by the Centers for Medicare and Medicaid Services (CMS) National and Local Coverage Determinations and state-specific Medicaid mandates, if any. Note: Lines of business (LOB) are subject to change without notice; current LOBs can be found at www.wellcare.com – select the Provider tab, then “Tools” and “Clinical Guidelines”.

Easy Choice Health Plan, Inc. ~ Exactus Pharmacy Solutions, Inc. ~ Harmony Health Plan of Illinois, Inc. ~ Missouri Care, Incorporated WellCare Health Insurance of Arizona, Inc., operating in Hawai'i as 'Ohana Health Plan, Inc. ~ WellCare Health Plans of Kentucky, Inc. WellCare Health Plans of New Jersey, Inc. ~ WellCare of Connecticut, Inc. ~ WellCare of Florida, Inc., operating in Florida as Staywell WellCare of Kentucky, Inc. ~ WellCare of Georgia, Inc. ~ WellCare of Louisiana, Inc. ~ WellCare of New York, Inc. WellCare of South Carolina, Inc. ~ WellCare of Texas, Inc. ~ WellCare Prescription Insurance, Inc. ~ Windsor Health Plan, Inc.

MEDICAL POLICY COMMITTEE HISTORY AND REVISIONS

Date	Medical Policy Committee History and Revisions
12/16/2015	<ul style="list-style-type: none"> • Approved by MPC. Addition of USPSTF and other cardiology related organizations.
2/5/2015	<ul style="list-style-type: none"> • Approved by MPC. Additions from Heart Disease Care Management training.
12/5/2013	<ul style="list-style-type: none"> • Approved by MPC. Updated with 2013 ICSI guideline.
12/1/2011	<ul style="list-style-type: none"> • New template design approved by MPC.
3/2010	<ul style="list-style-type: none"> • Approved by MPC.