



| CLINICAL MEDICAL POLICY | |
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| Policy Number: | MP-057-MD-PA |
| Responsible Department(s): | Medical Management |
| Provider Notice/Issue Date: | 07/01/2025; 06/01/2024; 06/01/2023; 06/01/2022; 05/21/2021; 05/25/2020; 07/15/2019 |
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| Products: | Highmark Wholecare SM Medicaid |
| Application: | All participating hospitals and providers |
| Page Number(s): | 1 of 14 |

Policy History

| Date | Activity |
|------------|---|
| 08/01/2025 | Provider Effective date |
| 05/27/2025 | PARP Approval |
| 04/16/2025 | QI/UM Committee review |
| 04/16/2025 | Annual Review: Updated 'Procedure' section formatting. No changes to clinical criteria. Updated 'Summary of Literature' and 'Reference Sources' sections. |
| 07/01/2024 | Provider Effective date |
| 05/17/2024 | PARP Approval |
| 04/17/2024 | QI/UM Committee review |
| 04/17/2024 | Annual Review: Updated 'Procedure' section with additional indications for when cardiac rehabilitation is not medically necessary and additional contraindications. Added indications for home cardiac rehabilitation. Added CPT code 93797 to the 'Coding Requirements' section. |
| 07/01/2023 | Provider Effective date |
| 05/18/2023 | PARP Approval |
| 04/19/2023 | QI/UM Committee review |

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| 04/19/2023 | Annual Review: No changes to clinical criteria. Reformatted 'Procedures' section. Removed the word 'noncovered,' replaced with 'not medically necessary. Updated 'Summary of Literature' and 'Reference Sources' sections. |
| 07/01/2022 | Provider Effective date |
| 05/05/2022 | PARP Approval |
| 04/20/2022 | QI/UM Committee review |
| 04/20/2022 | Annual Review: Added the following bulletpoints to the Contraindications section: <i>Significant heart block without pacemaker, & orthostatic drop in blood pressure greater than or equal to 20 mm Hg.</i> Removed the following bulletpoints from the Contraindications section: <i>Grade 2 and Grade 3 AV blocks & severe psychological disorders.</i> Reformatted Procedures section. Added Governing Bodies Approval section. Updated Summary of Literature and Reference Sources sections. |
| 03/12/2017 | Initial policy developed |

Disclaimer

Highmark WholecareSM medical policy is intended to serve only as a general reference resource regarding coverage for the services described. This policy does not constitute medical advice and is not intended to govern or otherwise influence medical decisions.

Policy Statement

Highmark WholecareSM may provide coverage under the medical-surgical benefits of the Company's Medicaid products for medically necessary outpatient and medically supervised Phase II cardiac rehabilitation programs. Phase III and Phase IV cardiac rehabilitation programs are considered maintenance programs and considered not medically necessary.

This policy is designed to address medical necessity guidelines that are appropriate for the majority of individuals with a particular disease, illness or condition. Each person's unique clinical circumstances warrant individual consideration, based upon review of applicable medical records.

(Current applicable Pennsylvania HealthChoices Agreement Section V. Program Requirements, B. Prior Authorization of Services, 1. General Prior Authorization Requirements.)

Definitions

Prior Authorization Review Panel (PARP) – A panel of representatives from within the Pennsylvania Department of Human Services who have been assigned organizational responsibility for the review, approval and denial of all PH-MCO Prior Authorization policies and procedures.

Cardiac Rehabilitation – The American Association of Cardiovascular and Pulmonary Rehabilitation and the American Heart Association have defined cardiac rehabilitation as coordinated, multifaceted interventions designed to optimize a cardiac patient's physical, psychological, and social function, in

addition to stabilizing, slowing, or even reversing the progression of the underlying atherosclerotic processes, thereby reducing morbidity and mortality.

Metabolic Equivalent Task (MET) – A measure of exercise intensity, formally known as a metabolic equivalent. METS are directly related to the intensity of physical activity and the amount of oxygen consumed. The larger the MET value, the more calories burned.

Procedures

This medical policy addresses cardiac rehabilitation services that are provided on an outpatient basis during the immediate post-discharge period. Services rendered during the post-discharge period are considered Phase II Cardiac Rehabilitation Programs and are limited to electrocardiogram (ECG) monitored programs.

There is strong scientific evidence on the efficacy of cardiac rehabilitation in adults, however there is limited evidence in pediatric patients. This policy applies only to adults. Cardiac rehabilitation requests for pediatric patients will be reviewed by a Medical Director on a case-by-case basis. The case-by-case review must include the patient's age, diagnosis, surgical procedure, and prior acceptance into a pediatric cardiac rehabilitation program.

This policy does not address programs considered to be "intensive cardiac rehabilitation," such as the Dean Ornish Program for Reversing Heart Disease or the Pritikin Program.

1. Cardiac rehabilitation may be considered medically necessary when ALL of the following listed criteria are met:
 - A. The services are prescribed by the individual's treating physician; AND
 - B. The services are initiated within twelve (12) months of ANY of the following:
 - 1) Acute myocardial infarction (MI) heart attack; OR
 - 2) Coronary artery bypass graft (CABG) surgery; OR
 - 3) Percutaneous transluminal coronary angioplasty (PTCA) or coronary stenting; OR
 - 4) Heart valve surgery; OR
 - 5) Heart or heart-lung transplantation; OR
 - 6) Current stable angina pectoris; OR
 - 7) Compensated heart failure; OR
 - 8) Peripheral Artery Disease; OR
 - 9) Coronary artery disease (CAD) associated with chronic; stable angina pectoris that has failed to respond adequately to pharmacotherapy and is interfering with the ability to perform age-related activities of daily living and/or impairing functional abilities.
2. Contraindications
Absolute contraindications to cardiac rehabilitation include ANY of the following:
 - Unstable angina
 - Overt cardiac failure
 - Dangerous arrhythmias
 - Dissecting aneurysm
 - Myocarditis

- Acute pericarditis
 - Severe obstruction of the left ventricular outflow tract
 - Severe hypertension
 - Exertional hypotension or syncope
 - Uncontrolled diabetes mellitus
 - Severe orthopedic limitations
 - Recent systemic or pulmonary embolus.
3. Following the initial evaluation, services provided in conjunction with a phase II outpatient cardiac rehab program may be considered medically necessary for up to 36 sessions, three (3) sessions per week, for a 12-week period. The need for supervised exercise sessions can be determined by the individual's risk stratification as follows:
- Low Risk: 6-18 exercise sessions
 - Moderate Risk: 12-24 exercise sessions
 - High Risk: 18-36 exercise sessions (see *Informational* section below).

A routine cardiac rehabilitation session usually consists of an exercise training session lasting 20-60 minutes and at least ONE of the following:

- A. Continuous ECG/EKG monitoring during exercise; OR
- B. EKG rhythm strip with interpretation and physician's revision of the exercise program; AND/OR
- C. Limited physician follow-up to adjust medication or other treatment(s) related to the program.

Note: Cardiac rehabilitation exercise programs beyond the initial 12-week/36 sessions will require individual review by a Medical Director on a case-by-case basis. If documentation substantiates that additional sessions are medically necessary to reach a realistic and achievable increase in work capacity, the number of services may be extended, but not exceed a maximum of 24 weeks or 72 sessions.

4. ALL of the following components must be included in ALL cardiac rehabilitation programs:
- A. Physician-prescribed and physician-supervised exercise for each day that cardiac rehabilitation services are provided; AND
 - B. Cardiac risk factors modification (e.g., nutritional counseling, assessing smoking status, history and control of diabetes or hypertension, lipid management, and weight management); AND
 - C. Psychosocial assessment; AND
 - D. Outcomes assessment; AND
 - E. Individualized treatment plan detailing how each of the above components are utilized.
 - F. The individualized treatment plan must be established, reviewed, and signed by a physician every 30 days.

Note: A comprehensive evaluation and cardiac risk assessment should be performed prior to the initiation of cardiac rehabilitation to evaluate the individual and determine an appropriate exercise program. In addition to a medical examination, the evaluation may include an ECG stress test. Additional stress testing may also be performed at the completion of the program. Occupational and/or physical therapy are considered not medically necessary in conjunction with cardiac rehabilitation, unless the services are performed for an unrelated condition.

Note: If no clinically significant arrhythmia is documented during the first 3 weeks of the cardiac rehabilitation program, the provider may have the individual complete the remaining portion without telemetry monitoring.

5. When cardiac rehabilitation services are not considered medically necessary:

- Cardiac rehabilitation Phase II services are not medically necessary for conditions other than those listed above because the scientific evidence has not been established.
- Phase III cardiac rehabilitation programs, or self-directed, self-controlled, or monitored exercise programs are considered not medically necessary.
- Phase IV cardiac rehabilitation programs or maintenance therapy that may be safely carried out without medical supervision are considered not medically necessary.
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- Maintenance exercise programs are considered not covered once the individual has completed the formal prescribed program at a freestanding clinic or facility.
- Physical and/or occupational therapies are considered not medically necessary in conjunction with cardiac rehabilitation services unless performed for an unrelated diagnosis (e.g., a participant who is recuperating from an acute phase of heart disease may have also had a stroke which could require physical and/or occupational therapies.)
- Repeat participation in an outpatient cardiac rehabilitation program in the absence of another qualifying cardiac event is considered experimental/investigational and therefore, not medically necessary. Scientific evidence does not support the need for repeat cardiac rehabilitation in the absence of cardiac events.
- Educational services (e.g., lectures, counseling) that may be provided as part of a cardiac rehabilitation exercise program are not eligible for separate reimbursement.
- Cardiac rehabilitation when used in a preventative or prophylactic way, such as for angina, hypertension, or diabetes is considered not medically necessary.

6. Place of Service

- The proper place of service for cardiac rehabilitation is ambulatory outpatient, physician office, or hospital outpatient setting.
- All settings must have a physician immediately available and accessible for medical consultation and emergencies at all times when services are being furnished under the program.
- All medical personnel necessary to conduct cardiac rehabilitation must be trained in both basic and advanced life-support techniques.
- The facility must have available the necessary cardiopulmonary emergency, diagnostic, and therapeutic life-saving equipment accepted by the medical community as medically necessary.
- Home based cardiac rehabilitation programs, with on-line supervision, for Phase II Outpatient individuals may be considered medically necessary. Home based cardiac rehabilitation programs not meeting the criteria indicated in this policy are considered not medically necessary.

7. Post-payment Audit Statement

The medical record must include documentation that reflects the medical necessity criteria and is subject to audit by Highmark Wholecare at any time pursuant to the terms of your provider agreement.

Governing Bodies Approval

CMS

The Centers for Medicare and Medicaid Services (CMS) has published the following cardiac rehabilitation determinations:

- NCD Cardiac Rehabilitation Programs for Chronic Heart Failure (20.10.1)

Summary of Literature

Cardiovascular disorders are the leading cause of mortality and morbidity in the industrialized world and account for nearly 50% of all deaths annually. The Centers for Disease Control and Prevention reports that approximately 659,000 people die from heart disease in the United States each year, which is one in every four deaths. Of these heart attacks, 605,000 are first instances of heart attack, and 200,000 happen in people who have already had a heart attack. About 1 in 5 heart attacks is silent—the damage is done, but the person is not aware of it (CDC, 2022).

Programs for cardiac rehabilitation were first introduced in the 1960s for patients who were recovering from an acute myocardial infarction. Concerns about the safety of unsupervised exercise after discharge led to the development of highly structured rehabilitation programs that were supervised by physicians and included electrocardiographic monitoring. Indications for outpatient cardiac rehabilitation were expanded to other cardiac patients, such as those who experience postoperative cardiac surgery and myocardial pathology, and patients in heart failure.

The American Heart Association (AHA) defines cardiac rehabilitation as a medically supervised program designed to improve a patient's cardiovascular health if they have experienced heart attack, heart failure, angioplasty, or heart surgery. Cardiac rehab has three equally important parts:

1. **Exercise counseling and training:** Exercise gets the patient's heart pumping and the entire cardiovascular system working. The patient learns how to get their body moving in ways that promote heart health.
2. **Education for heart-healthy living:** A key element of cardiac rehab is educating the patient, including managing risk factors, smoking cessation, and making heart-healthy nutrition choices.
3. **Counseling to reduce stress:** Stress can injure the heart. Counseling helps the patient to identify and tackle everyday sources of stress (AHA, 2016).

The American College of Physicians, American College of Cardiology Foundation, American Heart Association/American Association of Thoracic Surgery, Preventive Cardiovascular Nurses Association, and Society of Thoracic Surgeons published a joint guideline on management of stable ischemic heart disease. The guideline states that cardiac rehabilitation can be useful in clinically stable patients with heart failure (HF) to improve functional capacity, exercise duration, health related quality of life (HRQOL), and mortality. Meta-analyses show that cardiac rehabilitation improves functional capacity, exercise duration, and reduces hospitalizations. Other benefits include improved endothelial function, blunted catecholamine spillover, increased peripheral oxygen extraction, and reduced hospital admission (Yancy, Jessup, Bozkurt, et al., 2013).

Cardiac rehabilitation is a complex, inter-professional intervention customized to individual patients with various cardiovascular diseases such as ischemic heart disease, heart failure, and myocardial infarctions,

or patients who have undergone cardiovascular interventions such as coronary angioplasty or coronary artery bypass grafting. Cardiac rehabilitation programs aim to limit the psychological and physiological stresses of CVD, reduce the risk of mortality secondary to CVD, and improve cardiovascular function. Accomplishing these goals is the result of improving overall cardiac function and capacity, halting or reversing the progression of atherosclerotic disease, and increasing the patient's self-confidence through gradual conditioning. Cardiac rehabilitation consists of three phases:

- **Phase I – Clinical Phase:** This phase begins in the inpatient setting soon after a cardiovascular event or completion of the intervention. It begins by assessing the patient's physical ability and motivation to tolerate rehabilitation. Therapists and nurses may start by guiding patients through non-strenuous exercises in the bed or at the bedside, focusing on a range of motion and limiting hospital deconditioning. The rehabilitation team may also focus on activities of daily living (ADLs) and educate the patient on avoiding excessive stress. Patients are encouraged to remain relatively rested until the completion of treatment of comorbid conditions or postoperative complications. The rehabilitation team assesses patient needs such as assistive devices, patient and family education, as well as discharge planning.
- **Phase II – Outpatient Cardiac Rehab:** Once a patient is stable and cleared by cardiology, outpatient cardiac rehabilitation may begin. Phase II typically lasts three to six weeks though some may last up to up to twelve weeks. Initially, patients have an assessment with a focus on identifying limitations in physical function, restrictions of participation secondary to comorbidities, and limitations to activities. A more rigorous patient-centered therapy plan is designed, comprising three modalities: information/advice, a tailored training program, and a relaxation program. The treatment phase intends to promote independence and lifestyle changes to prepare patients to return to their lives at home.
- **Phase III – Post-cardiac Rehab:** This phase involves more independence and self-monitoring. Phase III centers on increasing flexibility, strengthening, and aerobic conditioning. Patients receive encouragement towards maintaining an active lifestyle and continue the exercise. Outpatient visits to physician specialists are recommended to monitor cardiovascular health and medication regimens, promote healthy lifestyle changes and intervene when necessary to prevent relapse (Tessler, Bordon, 2022).

Initially, a comprehensive evaluation may be performed to evaluate the participant and determine an appropriate exercise program. In addition to typical program duration, an endpoint for cardiac rehabilitation services may also be determined using the participant's work capacity as measured by metabolic equivalents of task (MET). A MET is the measurement of the work required from the cardiovascular and pulmonary systems by a given activity. One MET equals approximately 3.5 ml of oxygen consumption per kilogram of body weight per minute.

Depending on variables such as age, sex, cardiac history, the existence of other complicating medical conditions, etc., work capacity usually levels out at a maximal level of five (5) to eight (8) METs for most cardiac rehabilitation participants. Reasonable endpoint criteria for medically supervised cardiac rehabilitation programs can include the ability of the participant to exercise at a level of eight (8) or more. METs without cardiac symptoms and the acquisition of the skills necessary for the self-monitoring of an unsupervised exercise program.

Since many participants with cardiac disease will not be capable of achieving this level of work capacity, the absence of improvement in capacity after three (3) serial exercise tests can be used as an alternative endpoint indicator. Once a participant's maximal work capacity has leveled out, ongoing exercise is considered maintenance. Additional cardiac rehabilitation services are eligible based on the clinical

criteria defined in this policy when the individual has a repeat occurrence of the covered conditions, e.g., another cardiovascular surgery, a new MI, etc.

Rationale

In the HF-ACTION clinical trial, 2,331 patients with heart failure Classes II-IV were randomized to exercise training (36 supervised sessions) and usual care versus usual care alone. This multicenter trial objective was to test the efficacy and safety of exercise training among patients with heart failure. The main outcome indicated that exercise training resulted in nonsignificant reduction in the primary end points of all-cause mortality or hospitalization and in key secondary clinical end points. After adjusting for highly prognostic predictors of the primary end point, exercise training was associated with significant reductions of modes; for both all-cause mortality or hospitalization and cardiovascular mortality or heart failure hospitalization. This trial was pivotal in the CMS decision to expand coverage of cardiac rehabilitation for Class IV heart failure.

In 2020, the European Association of Preventive Cardiology published an update on the effectiveness of comprehensive cardiac rehabilitation in coronary artery disease patients. The cardiac rehab outcome study (CROS II) confirms the effectiveness of CR participation after ACS and after CABG in actual clinical practice by reducing total mortality under the conditions of current evidence-based CAD treatment (Salzwedel A, Jensen K, et al., 2020).

In a systematic review of 19 random clinical trials, complex internet-based e-coaching was found to be an effective method of delivering therapies targeting physical capacity, clinical status, and psychosocial health; however, detailed protocols were not well described. Therefore, determining which aspects of e-coaching have the most benefit and need to be further developed have not been determined. In addition, basic e-coaching was not found to be effective. Studies on the effects of cardiac rehabilitation for congenital heart disease (CHD) patients are lacking. Randomized clinical trials in adult and pediatric populations are needed to establish specific guidelines and the current evidence (Tessler, Bordonni, 2022).

Pediatric Cardiac Rehabilitation

Children with cardiac disorders are at risk of neurodevelopmental and socioemotional maladjustment, on top of concerns with their physical health and activity levels. As a result, there is an increasing focus on rehabilitation efforts for these patients, in order to improve both their physical well-being and their psychosocial adjustment. The primary goals for pediatric cardiac rehabilitation are managing physical health and activity as well as socioemotional functioning. Given the key developmental tasks of childhood, such as gaining basic academic skills, there may be an additional focus on mitigating developmental and cognitive disruptions, which would not be a primary concern during adult cardiac rehabilitation (Akamagwuna, Badaly, 2019).

From prior reviews of cardiac rehabilitation programs for children with congenital heart defects (CHD) or cardiomyopathies, it has generally been recommended that programs have a duration of at least 12 weeks, with two to three sessions per week, and sessions of at least 30 min (and up to 90 min). Programs should include aerobics, resistance, and flexibility training, with warm-up and cool-down periods. Training should be individualized based on the results of metabolic stress tests, cardiac biomarkers, echocardiograms, baseline resistance-training capacity, and past medical history. Notably, the intensity of aerobic exercise should be at a heart rate approximately equivalent to anaerobic threshold. The patient's progress should be reviewed at least weekly, and progressive increases should be made in the child's exercise workload as tolerated and when medically appropriate. Programs might also benefit from

a 6-month maintenance period with two exercise visits per month, including a review of exercise logs. Both center-based and at-home training programs may be effective (Akamagwuna, Badaly, 2019).

While the beneficial effects of cardiac rehabilitation programs in adults are well known, there are very few clinical trials regarding the use of cardiac rehabilitation in pediatric patients.

In the Boston Pediatric Cardiac Rehab Study, a 12-week pediatric cardiac rehab study was conducted with 16 children aged 8 to 17. All 16 children who completed the program had heart surgery or a nonsurgical procedure, in which 11 of the 16 had only one functional heart pumping chamber. At the 7month follow up, it was found that the children who completed a twice weekly hour-long session had significant sustained improvements in exercise function as well as improvement in behavior, self-esteem, and emotional state. In addition, 15 of the 16 children had improved heart function, with the heart pumping more blood with each beat, delivering more oxygen.

Somarriba et al. (2008) reported on the effects of exercise rehabilitation for two children with dilated cardiomyopathy. These children underwent a structured exercise program that showed improvements in cardiovascular fitness and strength without deterioration in ventricular function. The authors recommend a careful and medically supervised approach for exercise in children with cardiomyopathy. It was noted that larger prospective studies are needed on the functional and metabolic responses for these children.

Coding Requirements

Procedure Code

| CPT/HCPCS Code | Description |
|-----------------------|---|
| 93797 | Physician or other qualified health care professional services for outpatient cardiac rehabilitation; without continuous ECG monitoring (per session) |
| 93798 | Physician or other qualified health care professional services for outpatient cardiac rehabilitation with continuous ECG monitoring (per session) |
| G0422 | Intensive cardiac rehabilitation; with or without continuous ECG monitoring with exercise, per session |
| G0423 | Intensive cardiac rehabilitation; with or without continuous ECG monitoring; without exercise, per session |

Diagnosis Codes

| ICD-10 Code | Description |
|--------------------|---|
| I09.81 | Rheumatic heart failure |
| I11.0 | Hypertensive heart disease with heart failure |
| I13.0 | Hypertensive heart and chronic kidney disease with heart failure and Stage I through Stage 4 chronic kidney disease, or unspecified chronic heart disease |
| I13.2 | Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease |
| I20.1 | Angina pectoris with documented spasm |
| I20.8 | Other forms of angina pectoris |
| I20.9 | Angina pectoris, unspecified |

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| I21.A1 | Myocardial infarction type 2 |
| I21.A9 | Other myocardial infarction type |
| I21.01 | ST elevation (STEMI) myocardial infarction involving left main coronary artery |
| I21.02 | ST elevation (STEMI) myocardial infarction involving left anterior descending coronary artery |
| I21.09 | ST elevation (STEMI) myocardial infarction involving other coronary artery of anterior wall |
| I21.11 | ST elevation (STEMI) myocardial infarction involving right coronary artery |
| I21.19 | ST elevation (STEMI) myocardial infarction involving other coronary artery of inferior wall |
| I21.21 | ST elevation (STEMI) myocardial infarction involving left circumflex coronary artery |
| I21.29 | ST elevation (STEMI) myocardial infarction involving other sites |
| I21.3 | ST elevation (STEMI) myocardial infarction involving of unspecified site |
| I21.4 | Non-ST elevation (NSTEMI) myocardial infarction |
| I22.0 | Subsequent ST elevation (STEMI) myocardial infarction of anterior wall |
| I22.1 | Subsequent ST elevation (STEMI) myocardial infarction of inferior wall |
| I22.2 | Subsequent non-ST elevation (NSTEMI) myocardial infarction |
| I22.8 | Subsequent ST elevation (STEMI) myocardial infarction of other sites |
| I22.9 | Subsequent ST elevation (STEMI) myocardial infarction of unspecified sites |
| I23.7 | Postinfarction angina |
| I23.8 | Other current complications following an acute myocardial infarction |
| I25.111 | Atherosclerotic heart disease of native coronary artery with angina pectoris with documented spasm |
| I25.118 | Atherosclerotic heart disease of native coronary artery with other forms of angina pectoris |
| I25.119 | Atherosclerotic heart disease of native coronary artery with unspecified angina pectoris |
| I25.2 | Old myocardial infarction |
| I25.6 | Silent myocardial ischemia |
| I25.700 | Atherosclerosis of coronary artery bypass graft(s), unspecified, with unstable angina pectoris |
| I25.701 | Atherosclerosis of coronary artery bypass graft(s), unspecified, with angina pectoris with documented spasm |
| I25.708 | Atherosclerosis of coronary artery bypass graft(s), unspecified, with other forms of angina pectoris |
| I25.709 | Atherosclerosis of coronary artery bypass graft(s), unspecified, with unspecified angina pectoris |
| I25.710 | Atherosclerosis of autologous coronary vein bypass graft(s), unspecified, with unstable angina |
| I25.711 | Atherosclerosis of autologous vein coronary artery bypass graft(s), with unstable angina pectoris |
| I25.718 | Atherosclerosis of autologous vein coronary artery bypass graft(s), with angina pectoris with documented spasm |
| I25.719 | Atherosclerosis of autologous vein coronary artery bypass graft(s), with unspecified angina pectoris |
| I25.720 | Atherosclerosis of autologous artery coronary artery bypass graft(s), with unstable angina pectoris |
| I25.721 | Atherosclerosis of autologous artery coronary artery bypass graft(s), with angina pectoris with documented spasm |
| I25.728 | Atherosclerosis of autologous artery coronary artery bypass graft(s), with other forms of angina pectoris |
| I25.729 | Atherosclerosis of autologous artery coronary artery bypass graft(s), with unspecified angina pectoris |
| I25.730 | Atherosclerosis of nonautologous biological artery coronary artery bypass graft(s), with unstable angina |
| I25.731 | Atherosclerosis of nonautologous biological artery coronary artery bypass graft(s), with angina |
| I25.738 | Atherosclerosis of nonautologous biological artery coronary artery bypass graft(s), with other forms of angina pectoris |

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| I25.739 | Atherosclerosis of nonautologous biological artery coronary artery bypass graft(s), with unspecified angina pectoris |
| I25.750 | Atherosclerosis of native coronary artery of transplanted heart with unstable angina pectoris |
| I25.751 | Atherosclerosis of native coronary artery of transplanted heart with angina pectoris with documented spasm |
| I25.758 | Atherosclerosis of native coronary artery of transplanted heart with other forms of angina pectoris |
| I25.759 | Atherosclerosis of native coronary artery of transplanted heart with unspecified angina pectoris |
| I25.760 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with unstable angina pectoris |
| I25.761 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with angina pectoris with documented spasm |
| I25.768 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with other forms of angina pectoris |
| I25.769 | Atherosclerosis of bypass graft of coronary artery of transplanted heart with unspecified forms of angina pectoris |
| I25.790 | Atherosclerosis of other coronary artery bypass graft(s) with unstable angina pectoris |
| I25.791 | Atherosclerosis of other coronary artery bypass graft(s) with angina pectoris with documented spasm |
| I25.798 | Atherosclerosis of other coronary artery bypass graft(s) with other forms of angina pectoris |
| I25.799 | Atherosclerosis of other coronary artery bypass graft(s) with unspecified angina pectoris |
| I25.810 | Atherosclerosis of coronary artery bypass graft(s) without angina pectoris |
| I25.811 | Atherosclerosis of native coronary artery of transplanted heart without angina pectoris |
| I25.812 | Atherosclerosis of bypass graft of coronary artery graft of transplanted heart without angina pectoris |
| I25.89 | Other forms of chronic ischemic heart disease |
| I25.9 | Chronic ischemic heart disease, unspecified |
| I50.22 | Chronic systolic (congestive) heart failure |
| I50.32 | Chronic diastolic (congestive) heart failure |
| I50.33 | Acute on chronic diastolic (congestive) heart failure |
| I50.42 | Chronic combined systolic (congestive) and diastolic (congestive) heart failure |
| I50.812 | Chronic right heart failure |
| I50.814 | Right heart failure due to left heart failure |
| I50.82 | Biventricular heart failure |
| I50.83 | High output heart failure |
| I50.84 | End stage heart failure |
| I50.89 | Other heart failure |
| Z48.21 | Encounter for aftercare following heart transplant |
| Z48.280 | Encounter for aftercare following heart-lung transplant |
| Z48.812 | Encounter for surgical aftercare following surgery on the circulatory system |
| Z94.1 | Heart transplant status |
| Z94.3 | Heart and lungs transplant status |
| Z95.1 | Presence of aortocoronary bypass graft |
| Z95.2 | Presence of prosthetic heart valve |
| Z95.3 | Presence of xenogeneic heart valve |
| Z95.4 | Presence of other heart-valve replacement |
| Z95.5 | Presence of coronary angioplasty implant and graft |
| Z96.82 | Presence of neurostimulator |

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| Z96.89 | Presence of other specified functional implants |
| Z98.61 | Coronary angioplasty status |
| Z98.890 | Other specified postprocedural states |

Informational

Classes of Heart Failure

| Class | Description |
|--------------|--|
| Class I | Patients with cardiac disease but resulting in no limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitation, dyspnea or angina pain. |
| Class II | Patients with cardiac disease resulting in slight limitation of physical activity. Patients are comfortable at rest. Ordinary physical activity results in fatigue, palpitation, and dyspnea. |
| Class III | Patients with cardiac disease resulting in marked limitation of physical activity. Patients are comfortable at rest. Less than ordinary activity causes fatigue, palpitation, and dyspnea. |
| Class IV | Patients with cardiac disease resulting in inability to carry on any physical activity without discomfort. Symptoms of heart failure at rest. If any physical activity undertaken, discomfort increases. |

New York Heart Association (NYHA) Functional Classification

Cardiac Rehabilitation Stratifications

- Individuals are considered **high risk** when ANY of the following conditions exist:
 - Decrease in systolic blood pressure of 15 mm Hg or more with exercise
 - Exercise test limited to, less than, or equal to 5 METS
 - Marked exercise-induced ischemia, as indicated by either angina pain or 2 mm or more ST depression by ECG
 - Recent myocardial infarction (less than 6 months) which was complicated by serious ventricular arrhythmia, cardiogenic shock, or CHF
 - Resting complex ventricular arrhythmia
 - Severely depressed left ventricular function (LVEF less than 30%)
 - Survivor of sudden cardiac arrest
 - Ventricular arrhythmia appearing or increasing with exercise or occurring in the recovery phase of stress testing.
- Cardiac rehabilitation patients are considered an **intermediate risk** when ANY of the following conditions exist:
 - Exercise test limited to 6 to 9 METS
 - Ischemic ECG response to exercise of less than 2 mm of ST depression
 - Previous uncomplicated myocardial infarction, coronary artery bypass surgery, or angioplasty, and has a post-cardiac event maximal function capacity of 8 METS or less on ECG exercise test.
- Cardiac rehabilitation patients are considered a **low risk** when exercise test are limited to greater than 9 METS.

Reimbursement

Participating facilities will be reimbursed per their Highmark WholecareSM contract.

Reference Sources

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