

CLINICAL MEDICAL POLICY	
Policy Name:	Cardiac Rehabilitation, Phase II Outpatient
Policy Number:	MP-057-MD-PA
Responsible Department(s):	Medical Management
Provider Notice/Issue Date:	06/01/2023; 06/01/2022; 05/21/2021; 05/25/2020; 07/15/2019
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Products:	Highmark Wholecare [™] Medicaid
Application:	All participating hospitals and providers
Page Number(s):	1 of 14

Policy History

Date	Activity
07/01/2023	Provider Effective date
05/18/2023	PARP Approval
04/19/2023	QI/UM Committee review
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:
	Significant heart block without pacemaker, & orthostatic drop in blood pressure
	greater than or equal to 20 mm Hg. Removed the following bulletpoints from the
	Contraindications section: Grade 2 and Grade 3 AV blocks & severe psychological
	disorders. Reformatted Procedures section. Added Governing Bodies Approval
	section. Updated Summary of Literature and Reference Sources sections.
06/21/2021	Provider Effective Date
05/07/2021	PARP Approval
04/21/2021	QI/UM Committee Review
04/21/2021	Annual Review: Revised medical necessity statement, formatting changes. Updated
	summary of literature and references.

06/22/2020	Provider effective date
05/07/2020	PARP Approval
04/15/2020	QI/UM Committee Review
04/15/2020	Annual Review: Updated criteria in the Procedure section 1.A.8 change CHF
	classification from III to IV to II to IV; Updated ICD 10 codes- added I09.81, I11.0,
	113.0, 113.2, 123.7, 123.8, 125.6, 125.810 to 125.812, 125.89, 125.9, 150.812, 150.814,
	I50.82, I50.83, I50.84, I50.89, IZ96.82, Z96.89, Z98.890; Deleted ICD-10 codes I25.110,
	150.20 & 150.21, 150.23, I 50.30, 150.31. 150.40, 150.41, 150.43. 150.9, Z95.811, Z95.812
	&Z95.818 references updated.
07/15/2019	Provider effective date
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 Wholecare[™] 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 adult patients, however there is limited evidence in pediatric patients. This policy applies only to adult patients. 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 patient's treating physician; AND
 - B. The services are initiated within 90 days of the cardiac event; AND
 - C. The services are completed within 12 months for ANY of the following conditions:
 - 1) Acute myocardial infarction (AMI)/Acute coronary syndrome (ACS); OR
 - 2) Coronary artery bypass grafting (CABG); OR
 - 3) Heart or heart/lung transplantation; OR
 - 4) Percutaneous coronary intervention (PTCA, angioplasty, stents, atherectomy); OR
 - 5) The patient is a survivor of sudden cardiac death; OR
 - 6) The patient is a survivor of sustained ventricular tachycardia or fibrillation; OR
 - 7) Heart valve replacement/repair; OR
 - 8) Class II to IV congestive heart failure (CHF) that has failed to respond to pharmacotherapy, and the condition is interfering with the ability to perform age-related activities of daily living (ADL); OR
 - 9) Coronary Artery Disease (CAD) with chronic stable angina pectoris that has failed to respond to pharmacotherapy and is interfering with the ability to perform age-related ADL; OR
 - 10) The placement of ventricular assist device.
- 2. Additional cardiac rehabilitation sessions may be medically necessary based on the above criteria, AND when ANY of the following have occurred:
 - A. The patient has an additional cardiovascular surgery or angioplasty; OR
 - B. There is evidence of new coronary lesion(s) documented by cardiac catheterization; OR
 - C. The patient experiences, and there is documentation of, another myocardial infarction or extension of the initial infarction.

- 3. 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 patient 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.

- 4. Cardiac rehabilitation patients are considered <u>high risk</u> when ANY of the following conditions exist:
 - A. Decrease in systolic blood pressure of 15 mm Hg or more with exercise; OR
 - B. Exercise test limited to, less than, or equal to 5 METS; OR
 - C. Marked exercise-induced ischemia, as indicated by either angina pain or 2 mm or more ST depression by ECG; OR
 - D. Recent myocardial infarction (less than 6 months) which was complicated by serious ventricular arrhythmia, cardiogenic shock, or CHF; OR
 - E. Resting complex ventricular arrhythmia; OR
 - F. Severely depressed left ventricular function (LVEF less than 30%); OR
 - G. Survivor of sudden cardiac arrest; OR
 - H. Ventricular arrhythmia appearing or increasing with exercise, or occurring in the recovery phase of stress testing.

Cardiac rehabilitation programs for high-risk patients should include ALL of the following:

- A. 18-36 sessions (e.g., 3 times a week for 12 weeks) of supervised exercise with continuous telemetry monitoring; AND
- B. An individual outpatient exercise program that can be self-monitored and maintained; AND
- C. Educational program for risk factor/stress reduction.

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

- 5. Cardiac rehabilitation patients are considered an <u>intermediate-risk</u> when ANY of the following conditions exist:
 - A. Exercise test limited to 6 to 9 METS; OR
 - B. Ischemic ECG response to exercise of less than 2 mm of ST depression; OR

C. 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 programs for <u>intermediate-risk</u> patients should include ALL of the following:

- A. 12-24 sessions or less of exercise training without continuous ECG monitoring; AND
- B. The program's goal is to determine an ongoing exercise program that is "self-administered."
- 6. Cardiac rehabilitation patients are considered a <u>low-risk</u> when exercise test are limited to greater than 9 METS.

Cardiac rehabilitation programs for low-risk patients should include:

- A. 6-18 one-hour sessions involving risk factor reduction education and supervised exercise to show safety; AND
- B. The program's goal is to define a home program.
- 7. The medically necessary frequency and duration of a cardiac rehabilitation program is determined by the patient's level of cardiac risk stratification. Cardiac rehabilitation program sessions are limited to a maximum of two 1-hour sessions per day, for a total of 36 sessions. A Medical Director's review is required for requests greater than the recommended number of sessions.
- 8. Contraindications for outpatient cardiac rehabilitation programs include ANY of the following:
 - unstable angina
 - uncontrolled high blood pressure
 - left ventricular outflow tract obstruction
 - significant heart block without pacemaker
 - myocarditis
 - active pericarditis
 - severe valvular disease, including, but not limited to, significant aortic stenosis
 - uncontrolled ventricular or atrial arrhythmias
 - uncompensated heart failure
 - aortic dissection
 - acute thrombophlebitis
 - pulmonary or systemic embolism
 - acute systemic illness and/or fever
 - severe mobility limitations
 - orthostatic drop in blood pressure greater than or equal to 20 mm Hg
- 9. 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 and Phase IV cardiac rehabilitation programs are not medically necessary as these programs are self-directed and can be carried out without medical supervision.

10. 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.

11. 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 (20.10)
- 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 myocardiopathy, 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 hurts can injure the heart. This part of cardiac rehab 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, Bordoni, 2022).

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, Bordoni, 2022).

Hayes, Inc.

- Comparative Effectiveness Review Of Intensive Cardiac Rehabilitation Programs For Coronary Artery Disease (CAD)
 - o **D2 Rating**: The focus of this report is to evaluate the comparative effectiveness and safety of intensive cardiac rehabilitation (ICR) programs relative to usual care (UC) and conventional cardiac rehabilitation (CCR). For the purposes of this technology assessment, intensive programs are defined as multimodal interventions, including physician-prescribed exercise, cardiac risk factor modification, psychosocial assessment, outcomes assessment, and an individualized treatment plan, and are administered with greater session frequency and duration than conventional programs (72 1-hour sessions, up to 6 sessions daily).

Limited evidence suggests advantages of ICR over UC; however, the only available comparative studies were published over 15 years ago, and may not reflect current practices for UC in patients with CAD, which now include CCR. The published evidence is insufficient to inform whether ICR has advantages compared with CCR. As the evidence does not demonstrate an incremental benefit of ICR over CCR, the technology has not been shown to fulfill its intended purpose. Evidence is also insufficient to inform which program, if any, is associated with the best outcomes. There are no known safety issues associated with ICR (Hayes, 2021).

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 aerobic, 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 7-month 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 Code	Description
93798	Physician or other qualified health care professional services for outpatient cardiac
	rehabilitation with continuous ECG monitoring (per session)

Noncovered Procedure Code

CPT Code	Description
93797	Physician or other qualified health care professional services for outpatient cardiac
	rehabilitation; without continuous ECG monitoring (per session)

Diagnosis Codes

ICD-10	Diagnosis Codes ICD 10 Description	
Code	Description	
109.81	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	
120.1	Angina pectoris with documented spasm	
120.8	Other forms of angina pectoris	
120.9	Angina pectoris, unspecified	
I21.A1	Myocardial infarction type 2	
I21.A9	Other myocardial infarction type	
I21.01	ST elevation (STEMI) myocardial infarction involving left main coronary artery	
121.02	ST elevation (STEMI) myocardial infarction involving left anterior descending coronary artery	
121.09	ST elevation (STEMI) myocardial infarction involving other coronary artery of anterior wall	
121.11	ST elevation (STEMI) myocardial infarction involving right coronary artery	
121.19	ST elevation (STEMI) myocardial infarction involving other coronary artery of inferior wall	
I21.21	ST elevation (STEMI) myocardial infarction involving left circumflex coronary artery	
121.29	ST elevation (STEMI) myocardial infarction involving other sites	
I21.3	ST elevation (STEMI) myocardial infarction involving of unspecified site	
121.4	Non-ST elevation (NSTEMI) myocardial infarction	
122.0	Subsequent ST elevation (STEMI) myocardial infarction of anterior wall	
122.1	Subsequent ST elevation (STEMI) myocardial infarction of inferior wall	
122.2	Subsequent non-ST elevation (NSTEMI) myocardial infarction	
122.8	Subsequent ST elevation (STEMI) myocardial infarction of other sites	
122.9	Subsequent ST elevation (STEMI) myocardial infarction of unspecified sites	
123.7	Postinfarction angina	
123.8	Other current complications following an acute myocardial infarction	
125.111	Atherosclerotic heart disease of native coronary artery with angina pectoris with documented spasm	
125.118	Atherosclerotic heart disease of native coronary artery with other forms of angina pectoris	
125.119	Atherosclerotic heart disease of native coronary artery with unspecified angina pectoris	
125.2	Old myocardial infarction	
125.6	Silent myocardial ischemia	
125.700	Atherosclerosis of coronary artery bypass graft(s), unspecified, with unstable angina pectoris	
125.701	Atherosclerosis of coronary artery bypass graft(s), unspecified, with angina pectoris with	
	documented spasm	
125.708	Atherosclerosis of coronary artery bypass graft(s), unspecified, with other forms of angina pectoris	
125.709	Atherosclerosis of coronary artery bypass graft(s), unspecified, with unspecified angina pectoris	
125.710	Atherosclerosis of autologous coronary vein bypass graft(s), unspecified, with unstable angina	
125.711	Atherosclerosis of autologous vein coronary artery bypass graft(s), with unstable angina pectoris	
125.718	Atherosclerosis of autologous vein coronary artery bypass graft(s), with angina pectoris with documented spasm	
125.719	Atherosclerosis of autologous vein coronary artery bypass graft(s), with unspecified angina pectoris	

125.720	Atherosclerosis of autologous artery coronary artery bypass graft(s), with unstable angina pectoris
125.721	Atherosclerosis of autologous artery coronary artery bypass graft(s), with angina pectoris with documented spasm
125.728	Atherosclerosis of autologous artery coronary artery bypass graft(s), with other forms of angina
	pectoris
125.729	Atherosclerosis of autologous artery coronary artery bypass graft(s), with unspecified angina pectoris
125.730	Atherosclerosis of nonautologous biological artery coronary artery bypass graft(s), with unstable
	angina
125.731	Atherosclerosis of nonautologous biological artery coronary artery bypass graft(s), with angina
125.738	Atherosclerosis of nonautologous biological artery coronary artery bypass graft(s), with other forms of angina pectoris
125.739	Atherosclerosis of nonautologous biological artery coronary artery bypass graft(s), with unspecified angina pectoris
125.750	Atherosclerosis of native coronary artery of transplanted heart with unstable angina pectoris
125.751	Atherosclerosis of native coronary artery of transplanted heart with angina pectoris with documented spasm
125.758	Atherosclerosis of native coronary artery of transplanted heart with other forms of angina pectoris
125.759	Atherosclerosis of native coronary artery of transplanted heart with unspecified angina pectoris
125.760	Atherosclerosis of hative coronary artery of transplanted heart with unstable angina Atherosclerosis of bypass graft of coronary artery of transplanted heart with unstable angina
	pectoris
125.761	Atherosclerosis of bypass graft of coronary artery of transplanted heart with angina pectoris with documented spasm
125.768	Atherosclerosis of bypass graft of coronary artery of transplanted heart with other forms of angina pectoris
125.769	Atherosclerosis of bypass graft of coronary artery of transplanted heart with unspecified forms of angina pectoris
125.790	Atherosclerosis of other coronary artery bypass graft(s) with unstable angina pectoris
125.791	Atherosclerosis of other coronary artery bypass graft(s) with angina pectoris with documented spasm
125.798	Atherosclerosis of other coronary artery bypass graft(s) with other forms of angina pectoris
125.799	Atherosclerosis of other coronary artery bypass graft(s) with unspecified angina pectoris
125.810	Atherosclerosis of coronary artery bypass graft(s) without angina pectoris
125.811	Atherosclerosis of native coronary artery of transplanted heart without angina pectoris
125.811	Atherosclerosis of hative coronary artery of transplanted heart without angina pectoris Atherosclerosis of bypass graft of coronary artery graft of transplanted heart without angina
	pectoris
125.89	Other forms of chronic ischemic heart disease
125.9	Chronic ischemic heart disease, unspecified
150.22	Chronic systolic (congestive) heart failure
150.32	Chronic diastolic (congestive) heart failure
150.33	Acute on chronic diastolic (congestive) heart failure
150.42	Chronic combined systolic (congestive) and diastolic (congestive) heart failure
150.812	Chronic right heart failure
150.814	Right heart failure due to left heart failure
150.82	Biventricular heart failure
150.83	High output heart failure
150.84	End stage heart failure
150.89	Other heart failure
Z48.21	Encounter for aftercare following heart transplant
5.2 -	

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
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

Reimbursement

Participating facilities will be reimbursed per their Highmark Wholecare^{5M} contract.

Reference Sources

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