Introduction

Cardiac rehabilitation — also called cardiac rehab — is a program to improve heart health. It’s done after an event like a heart attack, heart failure, or heart surgery. The goals are to help a person regain strength and also reduce the risk of future heart events. Cardiac rehab is supervised by medical professionals and usually has three areas of focus:

- **Evaluation:** This involves assessing physical abilities, limitations, and risk factors in order to create a program tailored to the individual.

- **Exercise:** This can take many forms such as walking, riding an exercise cycle, or even jogging. Lifting weights or other strength training activities may also be recommended.

- **Education and stress reduction:** Guidance is given about nutrition, lifestyle choices, and stress management.

This policy discusses when cardiac rehabilitation is covered.

**Note:** The Introduction section is for your general knowledge and is not to be taken as policy coverage criteria. The rest of the policy uses specific words and concepts familiar to medical professionals. It is intended for providers. A provider can be a person, such as a doctor, nurse, psychologist, or dentist. A provider also can be a place where medical care is given, like a hospital, clinic, or lab. This policy informs them about when a service may be covered.
# Policy Coverage Criteria

## Service | Medical Necessity
---|---
Outpatient cardiac rehabilitation programs | Outpatient cardiac rehabilitation programs are considered medically necessary for patients with a history of the following conditions and procedures:
- Acute myocardial infarction (MI) (heart attack) within the preceding 12 months
- Compensated heart failure
- Coronary artery bypass graft (CABG) surgery
- Current stable angina pectoris
- Heart valve surgery
- Heart or heart-lung transplantation
- Percutaneous transluminal coronary angioplasty (PTCA) or coronary stenting

**ALL of the following components must be included in cardiac rehabilitation programs:**
- Physician-prescribed exercise each day cardiac rehabilitation services are provided
**AND**
- Cardiac risk factor modification
**AND**
- Psychosocial assessment
**AND**
- Outcomes assessment
**AND**
- Individualized treatment plan detailing how each of the above components are utilized

**Note:** A cardiac rehabilitation exercise program is eligible for coverage for 3 sessions per week up to a 12-week period (36 sessions). Programs should start within 90 days of the cardiac event and be completed within 6 months of the cardiac event.

A comprehensive evaluation may be performed before initiation of cardiac rehabilitation to evaluate the patient and determine an appropriate exercise program. In addition to a medical examination, an
<table>
<thead>
<tr>
<th>Service</th>
<th>Medical Necessity</th>
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<tbody>
<tr>
<td></td>
<td>electrocardiogram stress test may be performed. An additional stress test may be performed at the completion of the program.</td>
</tr>
<tr>
<td>Physical and/or occupational therapy are considered not medically necessary in conjunction with cardiac rehabilitation unless performed for an unrelated diagnosis.</td>
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</tbody>
</table>

| Repeat participation | Repeat participation in an outpatient cardiac rehabilitation program in the absence of another qualifying cardiac event is considered not medically necessary. |

<table>
<thead>
<tr>
<th>Circumstance</th>
<th>Investigational</th>
</tr>
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<tbody>
<tr>
<td>Intensive cardiac rehabilitation</td>
<td>Intensive cardiac rehabilitation with the Ornish Program for Reversing Heart Disease or Pritikin Program is considered investigational.</td>
</tr>
</tbody>
</table>

**Coding**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>CPT</strong></td>
<td></td>
</tr>
<tr>
<td>93797</td>
<td>Physician services for outpatient cardiac rehab; without continuous ECG monitoring (per session)</td>
</tr>
<tr>
<td>93798</td>
<td>Physician services for outpatient cardiac rehab; with continuous ECG monitoring (per session)</td>
</tr>
<tr>
<td><strong>HCPCS</strong></td>
<td></td>
</tr>
<tr>
<td>G0422</td>
<td>Intensive cardiac rehabilitation; with or without continuous ECG monitoring with exercise, per session</td>
</tr>
<tr>
<td>G0423</td>
<td>Intensive cardiac rehabilitation; with or without continuous ECG monitoring; without exercise, per hour, per session</td>
</tr>
<tr>
<td>S9472</td>
<td>Cardiac rehabilitation program, non-physician provider, per diem</td>
</tr>
</tbody>
</table>

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Benefit Application

Cardiac rehabilitation is an outpatient service. Therefore, this policy only addresses cardiac rehabilitation in the outpatient setting.

Cardiac rehabilitation must be performed in a facility approved by the Plan.

Services that are educational in nature (e.g., lectures or counseling), which are performed as part of the cardiac rehabilitation program, are not eligible for coverage, even when occurring on a different date of service, unless specified in the contract or certificate of coverage.

Psychological testing and psychotherapy are not a usual component of cardiac rehabilitation. Such services for patients who have a psychiatric diagnosis must be considered under the Mental Health benefits of the contract.

The ongoing maintenance program that follows the 12-week rehabilitation program is not eligible for coverage.

Some contracts have an exclusion for cardiac rehabilitation, because this is considered “self-care” or “self-help” training. In these cases, any related diagnostic testing must also be excluded.

Evidence Review

Description

Cardiac rehabilitation refers to comprehensive medically supervised outpatient programs that aim to improve the function of patients with heart disease and prevent future cardiac events. National organizations have specified core components to be included in cardiac rehabilitation programs.
Background

Heart disease is the leading cause of mortality in the United States, causing more than half of all deaths. Coronary artery disease (CAD) is the most common cause of heart disease. In a 2015 update on heart disease and stroke statistics from the American Heart Association, it was estimated that 635,000 Americans have a new coronary attack (first hospitalized myocardial infarction or coronary heart disease death) and 300,000 have a recurrent attack annually. Both CAD and various other disorders - structural heart disease and other genetic, metabolic, endocrine, toxic, inflammatory, and infectious causes - can lead to the clinical syndrome of heart failure, of which there are about 650,000 new cases in the U.S. annually. Given the burden of heart disease, preventing secondary cardiac events and treating the symptoms of heart disease and heart failure have received much attention from national organizations.

In 1995, the U.S. Public Health Service (USPHS) defined cardiac rehabilitation services as, in part, “comprehensive, long-term programs involving medical evaluation, prescribed exercise, cardiac risk factor modification, education, and counseling. [These programs are] designed to limit the physiologic and psychological effects of cardiac illness, reduce the risk for sudden death or reinfarction, control cardiac symptoms, stabilize or reverse the atherosclerotic process, and enhance the psychosocial and vocational status of selected patients.” This USPHS guideline recommended cardiac rehabilitation services for patients with coronary heart disease and with heart failure, including those awaiting or following cardiac transplantation. A 2010 definition of cardiac rehabilitation by the European Association of Cardiovascular Prevention and Rehabilitation stated: “Cardiac rehabilitation can be viewed as the clinical application of preventive care by means of a professional multi-disciplinary integrated approach for comprehensive risk reduction and global long-term care of cardiac patients.” Since release of the USPHS guideline, other societies, including the American Heart Association (2005) and the Heart Failure Society of America (2010) have developed guidelines about the role of cardiac rehabilitation in patient care.

Summary of Evidence

For individuals who have diagnosed heart disease who receive outpatient cardiac rehabilitation, the evidence includes multiple randomized controlled trials (RTCs) and systematic reviews of these trials. Relevant outcomes are overall survival, disease-specific survival, symptoms, and morbid events. Meta-analyses of the available trials have found that cardiac rehabilitation improves health outcomes for selected patients, particularly those with coronary heart disease. The available evidence has limitations, including lack of blinded outcome assessment, but, for
the survival-related outcomes of interest, this limitation is less critical. The evidence is sufficient to determine that the technology results in meaningful improvement in the net health outcome.

For individuals who have diagnosed heart disease without a second event who receive repeat outpatient cardiac rehabilitation, the evidence includes no trials. Relevant outcomes are overall survival, disease-specific survival, symptoms, and morbid events. No studies were identified that evaluated the effectiveness of repeat participation in a cardiac rehabilitation program. The evidence is insufficient to determine the effects of the technology on health outcomes.

For individuals who have diagnosed heart disease who receive intensive cardiac rehabilitation with the Ornish Program for Reversing Heart Disease, the evidence includes 1 RCT and uncontrolled studies. Relevant outcomes are overall survival, disease-specific survival, symptoms, and morbid events. No RCTs have compared the Ornish Program to a “standard” cardiac rehabilitation program; 1 RCT compared it with usual care. The trial included patients with coronary artery disease and no recent cardiac events, and had mixed findings at 1 and 5 years. The trial had a small sample size for a cardiac trial (N=48), and only 35 patients were available for the 5-year follow-up. The Ornish Program is considered by the Centers for Medicare & Medicaid Services as an intensive cardiac rehabilitation program, but the program described in the RCT might meet criteria for standard cardiac rehabilitation. No studies were identified comparing the Ornish Program with any other cardiac rehabilitation program. The evidence is insufficient to determine the effects of the technology on health outcomes.

For individuals who have diagnosed heart disease who receive intensive cardiac rehabilitation with the Pritikin Program, the evidence includes 1 case series. Relevant outcomes are overall survival, disease-specific survival, symptoms, and morbid events. Studies are needed that compare the impact of intensive cardiac rehabilitation between the Pritikin Program and standard outpatient cardiac rehabilitation programs. The evidence is insufficient to determine the effects of the technology on health outcomes.

**Ongoing and Unpublished Clinical Trials**

Some ongoing and unpublished trials that might influence this policy are listed in Table 1.
# Table 1. Summary of Key Trials

<table>
<thead>
<tr>
<th>NCT No.</th>
<th>Trial Name</th>
<th>Planned Enrollment</th>
<th>Completion Date</th>
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<tbody>
<tr>
<td>NCT01822769</td>
<td>Cardiopulmonary Rehabilitation for Adolescents and Adults With Congenital Heart Disease</td>
<td>60</td>
<td>Dec 2015 (ongoing)</td>
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<tr>
<td>NCT02619422</td>
<td>More Intensive Cardiac Rehabilitation Programs in Less Time (másPORmenos)</td>
<td>509</td>
<td>Mar 2018</td>
</tr>
<tr>
<td>NCT02984449</td>
<td>Preventive Heart Rehabilitation to Prevent Complications in Patients Undergoing Elective Open Heart Surgery (Heart-ROCQ)</td>
<td>350</td>
<td>Aug 2025</td>
</tr>
</tbody>
</table>

NCT: national clinical trial.

## Practice Guidelines and Position Statements

**American College of Cardiology Foundation et al**

In 2013, the American College of Cardiology Foundation (ACCF) and the American Heart Association (AHA) updated their joint guidelines on the management of heart failure.\(^ \text{2} \) These guidelines included the following class II A recommendation related to cardiac rehabilitation (level of evidence B):

> Cardiac rehabilitation can be useful in clinically stable patients with HF [heart failure] to improve functional capacity, exercise duration, health-related quality of life, and mortality.

**American College of Physicians et al.**

In 2012, the American College of Physicians, ACCF, AHA, American Association for Thoracic Surgery, Preventive Cardiovascular Nurses Association, and Society of Thoracic Surgeons published joint guidelines on management of stable ischemic heart disease.\(^ \text{17} \) The guidelines included the following statement on cardiac rehabilitation:

> Medically supervised exercise programs, (cardiac rehabilitation) and physician-directed home-based programs are recommended for at-risk patients at first diagnosis.

**American Heart Association et al**
In 2007, the AHA and the American Association of Cardiovascular and Pulmonary Rehabilitation issued a consensus statement on the core components of cardiac rehabilitation programs. The core components included patient assessment before beginning the program, nutritional counseling, weight management, blood pressure management, lipid management, diabetes management, tobacco cessation, psychosocial management, physical activity counseling, and exercise training. Programs that only offer supervised exercise training are not considered to be cardiac rehabilitation. The guidelines specified the assessment, interventions, and expected outcomes for each of the core components. For example, symptom-limited exercise testing before exercise training was strongly recommended. The national guideline does not specify the optimal overall length of programs or number or duration of sessions.

**European Association for Cardiovascular Prevention and Rehabilitation (EACPR)**

In 2010, the European Association of Cardiovascular Prevention and Rehabilitation published a position paper on cardiac rehabilitation. Recommendations were based on a review of national guidelines from the United States and Europe. These recommendations stated that core components of multidisciplinary cardiac rehabilitation are “…patient assessment, physical activity counseling, exercise training, diet/nutritional counseling, weight-control management, lipid management, blood pressure monitoring, smoking cessation, and psychosocial management.”

The recommended criteria for adequate exercise training were:

- **Mode**: Continuous endurance: walking, jogging, cycling, swimming, rowing, stair climbing, elliptical trainers, and aerobic dancing.
- **Duration**: At least 20-30 minutes (preferably 45-60 minutes)
- **Frequency**: Most days (at least 3 days per week and preferably 6-7 days per week)
- **Intensity**: 50%-80% of peak oxygen consumption (close to anaerobic threshold) or of peak heart rate or 40%-60% of heart rate reserve; 10/20–14/20 of the Borg Rating of Perceived Exertion.

The position paper did not address repeat participation in cardiac rehabilitation programs.
Medicare National Coverage

**Cardiac Rehabilitation**

Medicare has had a National Coverage Determination (NCD) for cardiac rehabilitation since 1989. There was a change in Medicare coverage for cardiac rehabilitation in January 2010.\(^ {19} \)

Indications for coverage remain the same; namely, patients who have experienced at least one of the following:

- Acute myocardial infarction within the preceding 12 months
- Coronary artery bypass surgery
- Current stable angina pectoris
- Heart valve repair or replacement
- Percutaneous transluminal coronary angioplasty (PTCA) or coronary stenting
- Heart or heart-lung transplant

As of February 2014, a change was made to the patient criteria to expand eligibility for cardiac rehabilitation to patients with the following:

Stable, chronic heart failure, defined as patients with left ventricular ejection fraction of 35% or less and New York Heart Association (NYHA) class II to IV symptoms despite being on optimal heart failure therapy for at least six weeks. Stable patients are defined as patients who have not had recent (≤ 6 weeks) or planned (≤ 6 months) major cardiovascular hospitalizations or procedures.\(^ {20} \)

The 2010 criteria specify the required components of cardiac rehabilitation programs. Programs must include ALL of the following:

- Physician-prescribed exercise each day cardiac rehabilitation items and services are furnished
- Cardiac risk factor modification, including education, counseling and behavioral intervention at least once during the program, tailored to patients’ individual needs
- Psychosocial assessment
- Outcomes assessment
- Individualized treatment plan detailing how components are utilized for each patient.
In addition, criteria on the frequency and duration of cardiac rehabilitation services were updated. On or before December 31, 2009, Medicare covered 18 weeks of cardiac rehabilitation services, with contractor discretion to cover services beyond 18 weeks. Coverage could not exceed a total of 72 sessions for 36 weeks.

Beginning January 1, 2010, the criteria are:

Cardiac rehabilitation items and services must be furnished in a physician's office or a hospital outpatient setting. All settings must have a physician immediately available and accessible for medical consultations and emergencies at all-time items and services are being furnished under the program...

...[C]ardiac rehabilitation program sessions are limited to a maximum of two 1-hour sessions per day for up to 36 sessions over up to 36 weeks, with the option of an additional 36 sessions over an extended period of time if approved by the Medicare contractor.

**Intensive Cardiac Rehabilitation**

Beginning in January 2010, Medicare added intensive cardiac rehabilitation as a benefit. Intensive cardiac rehabilitation programs must be approved by Medicare on an individual basis.\(^{21}\)

The NCD described intensive cardiac rehabilitation in the following manner:

Intensive cardiac rehabilitation (ICR) refers to a physician-supervised program that furnishes cardiac rehabilitation services more frequently and often in a more rigorous manner. As required by §1861(eee)(4)(A) of the Social Security Act (the Act), an ICR program must show, in peer-reviewed published research, that it accomplished one or more of the following for its patients: (1) positively affected the progression of coronary heart disease; (2) reduced the need for coronary bypass surgery; and, (3) reduced the need for percutaneous coronary interventions. The ICR program must also demonstrate through peer-reviewed published research that it accomplished a statistically significant reduction in five or more of the following measures for patients from their levels before cardiac rehabilitation services to after cardiac rehabilitation services: (1) low density lipoprotein; (2) triglycerides; (3) body mass index; (4) systolic blood pressure; (5) diastolic blood pressure; and, (6) the need for cholesterol, blood pressure, and diabetes medications. Individual ICR programs must be approved through the national coverage determination process to ensure that they demonstrate these accomplishments.
In 2010, CMS also issued 2 decision memos on specific programs. One stated that the Ornish Program for Reversing Heart Disease met the intensive cardiac rehabilitation (ICR) program requirements and was included on the list of approved ICR programs. It provided the following description of the Ornish Program: “The Ornish Program for Reversing Heart Disease (also known as the Multisite Cardiac Lifestyle Intervention Program, Multicenter Cardiac Lifestyle Intervention Program and the Lifestyle Heart Trial program) ...incorporates comprehensive lifestyle modifications including exercise, a low-fat diet, smoking cessation, stress management training, and group support sessions. Over the years, the Ornish program has been refined but continues to focus on these specific risk factors.”

The other stated that the Pritikin Program met program requirements and was included on the list of approved ICR programs. As described in the decision memo: “The Pritikin program (also known as the Pritikin Longevity Program) evolved into a comprehensive program that is provided in a physician’s office and incorporates a specific diet (10%–15% of calories from fat, 15%–20% from protein, 65%–75% from complex carbohydrates), exercise and counseling lasting 21-26 days. An optional residential component is also available for participants.”

References


## History

<table>
<thead>
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<th>Date</th>
<th>Comments</th>
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<tr>
<td>02/02/99</td>
<td>Add to Therapy Section - New Policy</td>
</tr>
<tr>
<td>11/12/02</td>
<td>Replace Policy - Policy reviewed without literature review; new review date only</td>
</tr>
<tr>
<td>02/10/04</td>
<td>Replace Policy - Policy reviewed without literature review; new review date only. Title updated by dropping “Programs”</td>
</tr>
<tr>
<td>06/16/06</td>
<td>Replace Policy - Policy updated with new Medicare policy guidelines; reference added; no change in policy statement.</td>
</tr>
<tr>
<td>10/09/07</td>
<td>Replace Policy - Policy updated with literature review; no change in policy statement; policy status changed from AR to BC.</td>
</tr>
<tr>
<td>12/08/09</td>
<td>Replace Policy - Policy updated with literature review; no change to policy statement. Reference added.</td>
</tr>
<tr>
<td>08/10/10</td>
<td>Replace Policy - Policy updated with literature review through April 2010. Rationale re-written; reference numbers 1-5 added. “In the outpatient setting” added to policy title; changes to existing medically necessary policy statement include the addition of the indications “heart-lung transplantation” and “coronary stenting,” and specification of components in cardiac rehabilitation programs; second policy statement that repeat programs are investigational has been added.</td>
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<td>08/09/11</td>
<td>Replace Policy – Policy updated with literature review through April 2011. References 2, 5 and 8 added; no change to policy statements.</td>
</tr>
<tr>
<td>08/20/12</td>
<td>Replace policy. Policy updated with literature review through April 2012. References 3, 5, 6 and 7 added; other references renumbered or removed. No change to policy statements.</td>
</tr>
<tr>
<td>10/09/12</td>
<td>Update Coding Section – ICD-10 codes are now effective 10/01/2014.</td>
</tr>
<tr>
<td>08/16/13</td>
<td>Replace policy. Policy updated with literature review through May 13, 2013. References 3 and 9 added; other references renumbered or removed. No change to policy statements.</td>
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<tr>
<td>08/11/14</td>
<td>Annual Review. Policy updated with literature review through May 12, 2014. References 1-2, 5-6, 13, 15 added; others renumbered/removed. Policy statements unchanged. ICD-9 and ICD-10 diagnosis codes removed; they are not utilized in adjudication of the policy. ICD-9 procedure codes removed with the exception of 93.36 which is specific to this policy.</td>
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<td>Date</td>
<td>Comments</td>
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<tr>
<td>08/11/15</td>
<td>Annual Review. List of medically necessary conditions and procedures put in alpha-order format. Clinical trials list reformatted as a table. Policy updated with literature review through May 12, 2015; reference 18 added. Policy statements unchanged. CPT codes 93015, 93016 and 99215; these are not specific to the policy. ICD-9 procedure code 93.36 removed; informational only.</td>
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<td>08/01/17</td>
<td>Annual Review, approved July 18, 2017. Policy moved to new format. Policy updated with literature review through May 31, 2017; references 11, 14-16, and 22-23 added. Repeat participation is considered not medically necessary (previously considered investigational). Added statement that intensive cardiac rehabilitation with the Pritikin Program or the Ornish Program is considered investigational.</td>
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You can file a grievance in person or by mail, fax, or email. If you need help filing a grievance, the Civil Rights Coordinator is available to help you.

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U.S. Department of Health and Human Services
200 Independence Avenue SW, Room 509F, HHH Building
Washington, D.C. 20201, 1-800-368-1019, 800-537-7697 (TDD)

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