Medical Policy Reference Manual
Medical Policy

8.01.002 Cardiac Rehabilitation

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Description

Cardiac rehabilitation is described by the U. S. Public Health Service (USPHS) as consisting of "comprehensive, long-term programs involving medical evaluation, prescribed exercise, cardiac risk factor modification, education, and counseling." Further, according to the USPHS, 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." *****

A thorough patient evaluation is followed by monitored exercise, increased as tolerated, to achieve a level of function which will permit the patient to return to work or to maintain an optimum lifestyle for his health condition. A cardiac rehabilitation program (CRP) includes continuous EKG telemetric monitoring during exercise, EKG rhythm strip with interpretation, physician's revision of exercise prescription, and follow up examination for physician to adjust medication or change regimen.

NOTE: This policy does not address programs considered to be "Intensive Cardiac Rehabilitation Programs", such as the Dean Ornish Program for Reversing Heart Disease and the Pritikin Program, which are not covered programs.

***** *See Reference: Agency for Health Care Policy and Research*

Policy

A cardiac rehabilitation program is considered **medically necessary** for patients who are referred by a physician and with a history of one or more of the following conditions and procedures:

- acute myocardial infarction (MI) (heart attack) within the past 12 months
- coronary artery bypass graft (CABG) surgery
- percutaneous transluminal coronary angioplasty (PTCA) or coronary stenting
- heart valve repair or replacement
- heart or heart / lung transplantation
- stable angina pectoris

- compensated heart failure

Repeat participation in an outpatient cardiac rehabilitation program in the absence of another qualifying cardiac event is considered **experimental / investigational** as it does not meet TEC criteria #2-5.

Policy Guidelines

Experimental / Investigational

The term "experimental/investigational" describes services or supplies that are in the developmental stage and are in the process of human or animal testing. Services or supplies that do not meet all 5 of the criteria listed below adopted by the BlueCross BlueShield Association Technology Evaluation Center (TEC) are deemed to be experimental/investigational:

1. The technology* must have final approval from the appropriate government regulatory bodies; and

2. The scientific evidence must permit conclusions concerning the effect of the technology on health outcomes; and

3. The technology must improve the net health outcome; and

4. The technology must be as beneficial as any established alternatives; and

5. The improvement must be attainable outside the investigational settings.

*** Technology includes drugs, devices, processes, systems, or techniques**

Program Facility Requirements

Phase I: Program is provided during a hospital admission which is approved by the Plan.

Phase II: Program is provided in an outpatient setting which is approved by the Plan, and must meet the following criteria:

- The outpatient facility must be approved by either the Centers for Medicare and Medicaid Services or the Joint Commission on Accreditation of Health Care Organizations; and
- The facility must meet the definition of a hospital outpatient department or physician-directed clinic (a physician is on the premises and is available to perform medical duties at all times the facility is open and each patient is under the care of a hospital or clinic physician); and
- The facility has available for immediate use, all cardiopulmonary, emergency, diagnostic, and therapeutic life-saving equipment accepted by the medical community as medically necessary (examples: oxygen, cardiopulmonary resuscitation equipment, defibrillator); and
- The program is conducted in an area set aside for the exclusive use of the program while it is in session; and
- The program is staffed by personnel necessary to conduct the program safely and effectively, who are trained in both basic and advanced life support techniques and in exercise therapy for cardiac disease. Services of non-physician personnel must be furnished under the direct supervision of a physician; Direct supervision means the physician must be present and on the premises of the location and immediately available to furnish assistance and direction throughout the performance of the procedure; and
- The non-physician personnel are employees of either the physician, hospital or clinic conducting the program, and their services are included in the reimbursement for physician professional services.

Program Components

The following components should be included in cardiac rehabilitation programs:

- Physician-prescribed exercise each day cardiac rehabilitation services are provided;
- Cardiac risk factor modification;
- Psychosocial assessment;
- Outcomes assessment; and
- Individualized treatment plan detailing how each of the above components are utilized.

A routine session consists of exercise training sessions lasting 20-40 minutes, and one or more of the following services:

- Continuous EKG monitoring during exercise
- EKG rhythm strip with interpretation and physician's revision of exercise program
- Limited physician follow-up to adjust medication or other treatment related to program.

A comprehensive evaluation may be performed prior to initiation of cardiac rehabilitation to evaluate the patient and to determine an appropriate exercise program. In addition to a medical examination, an EKG stress test may be performed. An additional stress test may be performed at the completion of the program.

Duration of program

- The program is considered to be reasonable for up to 36 sessions, usually 2 - 3 sessions per week for 12-18 weeks.
- Participation beyond this time will be reviewed on a case-by-case basis.
- When the patient has not met exit criteria, additional sessions may be provided, but should not exceed a maximum of 72 sessions within a 36-week period.

Exit criteria guidelines

- The patient has achieved a stable level of exercise tolerance without ischemia or dysrhythmia;
- Symptoms of angina or dyspnea are stable at the patient's maximum exercise level;
- Patient's resting blood pressure and heart rate are within normal limits;
- The stress test is not positive during exercise.

A written treatment plan signed by a physician member of the cardiac rehabilitation program may be requested by the Plan.

<u>Rationale:</u>

The American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR), the American College of Cardiology, and the American Hospital Association, as well as the American Heart Association have encouraged the use of cardiac rehabilitation as standard of care for persons with coronary heart disease. They cite the clinical evidence which demonstrates a reduction in total and cardiovascular mortality for cardiac participants compared to non-participants, as well as a reduction in cardiovascular risk factors (e.g., sedentary lifestyle and low physical

fitness, obesity, dyslipidemia, hypercoagulability) after participation in medically supervised cardiac rehabilitation programs.

Update 2010:

A search of the peer-reviewed literature was performed from February 2008 to February 2010. Findings in the recent literature do not change the conclusions regarding the medically necessary indications for cardiac rehabilitation. Therefore, the policy statement is unchanged.

Update 2012:

A search of the peer-reviewed literature was performed from February 2010 through April 2012. Based on a review of the literature, the policy has been updated to include core components in cardiac rehabilitation programs in the Policy Guidelines.

Update 2014:

A search of the peer-reviewed literature was performed from May 2012 through May 2014. Findings in the recent literature do not change the conclusions regarding the medically necessary indications for cardiac rehabilitation. Therefore, the policy statement is unchanged.

Update 2016:

A search of the peer-reviewed literature was performed from June 2014 through June 2016. Findings in the recent literature do not change the conclusions regarding the medically necessary indications for cardiac rehabilitation. Therefore, the policy statement is unchanged.

Update 2018:

A search of the peer-reviewed literature was performed from July 2016 through July 2018. Findings in the recent literature do not change the conclusions regarding the medically necessary indications for cardiac rehabilitation programs. Therefore, the policy statement remains unchanged.

Update 2020:

A search of the peer-reviewed literature was performed from August 2018 through August 2020. Findings in the recent literature do not change the conclusion regarding the medically necessary indications for cardiac rehabilitation programs. Updated the policy statement relating to repeat participation in an outpatient cardiac rehabilitation program. In the absence of another qualifying cardiac event, repeat cardiac rehabilitation programs are considered experimental / investigational.

Benefit Applications

When benefits are provided in the member's contract, benefits are provided for Phase I CRP in an inpatient facility according to criteria listed in this policy.

When benefits are provided in the member's contract, benefits are provided for Phase II CRP in an outpatient setting according to criteria listed in this policy. Note: Each subscriber contract may have specific limitations regarding the program's place of service. Check contract for specifics.

Benefits are not provided for Phase III CRP or maintenance programs. Maintenance programs consist of activities that preserve the patient's present level of function and prevent regression of that function. Maintenance begins when the therapeutic goals of a treatment plan have been achieved, or when no additional progress is apparent or expected to occur.

Cardiac rehabilitation is a global *per-visit* benefit which includes a multidisciplinary team approach to provide therapeutic physical reconditioning, all monitoring services, comprehensive patient and family education on topics such as diet and personal behavior, as well as individualized family and group counseling to aid in mental and social adjustment to heart disease. These services are not to be reported or reimbursed separately as they are considered included in the global per-visit fee.

Additional benefits are not provided for physical therapy and occupational therapy when provided in conjunction with cardiac rehabilitation, as they are considered included in the global per-visit fee, unless there is a separate non-cardiac diagnosis. In this case, refer to the subscriber's individual contract regarding these benefits.

NOTE: For FEP business, check the member's contract for benefits.

Provider Guidelines

The cardiac rehabilitation program need not include a stress test but may accept one performed by the attending physician. Separate benefits **are provided** for stress testing when necessary for one or more of the followings:

- evaluation of chest pain
- development of exercise prescriptions for patient with cardiac disease
- pre- and post-operative evaluations for patients undergoing coronary artery bypass surgery

Duration of Program

Each subscriber contract may have specific and/or different limitations regarding the program's duration. Check contract for specifics.

Place of Service

Each subscriber contract may have specific limitations regarding the program's place of service. Check contract for specifics.

Plan of Treatment

The program should have a written treatment plan, signed by a physician member of the cardiac rehabilitation program, available upon request.

Submission of Claims

Claims for a cardiac rehabilitation program in the hospital outpatient department must be submitted on a UB-92 form with revenue code 943.

Report with the appropriate Category I CPT® code(s) for the specific services provided.

References

The following were among the resources reviewed and considered in developing this policy. By reviewing and considering the resources, CareFirst does not in any way endorse the contents thereof nor assume any liability or responsibility in connection therewith. The opinions and conclusions of the authors of these resources are their own, and may or may not be in agreement with those of CareFirst.

Agency for Health Care Policy and Research. (1995). *Clinical practice guideline: Cardiac rehabilitation as secondary prevention* (DHHS Publication 96-0673). Rockville: Author.

Agency for Health Care Policy and Research. (1995, October). *Cardiac rehabilitation, clinician's guide* (DHHS AHCPR Publication No. 96-0672). Rockville: Author. Retrieved March 28, 2002 from the World Wide Web: http://hstat.nlm.nih.gov/hq/Hquest/fws/T/db/local.ahcpr.clin.crpc/screen/Browse/s/52094/action/GetText/linek/0

Agency for Health Care Policy and Research. (1991, December). *Cardiac rehabilitation programs* (DHHS AHCPR Publication No. 92-0015). Rockville: Author. Retrieved March 27, 2002 from the World Wide Web: http://hstat.nlm.nih.gov/hq/Hquest/fws/T/db/local.hta.htar.htar92-3/screen/Browse/s/52094/action/GetText/linek/0

American College of Cardiology. (1997). ACC/AHA guidelines for exercise testing. Retrieved April 15, 2002 from the World Wide Web: http://www.acc.org/clinical/guidelines/exercise/jac5074fla37.htm#cardiac

American College of Physicians. (2006, December). *Medical management following myocardial infarction.* Retrieved from the World Wide Web on December 14, 2007 @http:/www.acponline.org/journals/news/dec06/extra/nondrug.htm

American Heart Association. (1994). Position statement, 71-0055: Cardiac rehabilitation programs. Retrieved April 3, 2002 from the World Wide Web: http://216.185.112.5/presenter.jhtml?identifier=1222

American Heart Association (2005). AHA Scientific Statement: Cardiac Rehabilitation and Secondary Prevention of Coronary Heart Disease. Retrieved December 19, 2005 from the World Wide Web: http://circ.ahajournals.org/cgi/content/full/111/3/369

Anderson, L., Thompson, D.R., Oldridge, N., Zwisler, A., Rees, K., Martin, N., & Taylor, R.S. (2016, January). Exercise-based rehabilitation for coronary heart disease. *Cochrane Database System Review.* Retrieved from http://www.cochrane.org/CD001800/VASC_exercise-based-rehabilitation-coronary-heart-disease

Balady, G.J., Williams, M.A., Bittner, V., (2007). AHA/AACVPR Scientific Statement: Core Components of Cardiac Rehabilitation Secondary Prevention Programs: 2007 Update. *Circulation;* 115:2675-2682.

Blue Cross Blue Shield of Delaware. (1989, April 5; revised 2000, December 14). Monitored cardiac rehabilitation (Health Benefits Policy 204-01). Wilmington, Delaware: Author.

Blum, M.R., Schmid, J.P., Eser, P., & Saner, H. (2013). Long-term results of as 12-week comprehensive ambulatory cardiac rehabilitation program. *Journal of Cardiopulmonary Rehabilitation and Prevention*, 2013; xx: 1-7.

Braverman, D.L., (2011, July). Cardiac rehabilitation: a contemporary review. *Am J Phys Med Rehabil*., 90(7):599-611.

Centers for Medicare and Medicaid Services. Decision memo for cardiac rehabilitation (CR) programs - chronic heart failure (CAG-00437N). ONLINE. 18 February 2014. Medicare Coverage Database. Retrieved from http://www.cms.gov/medicare-coverage-database/details/nca-decision-meme.aspx?NCAid

Centers for Medicare and Medicaid Services; Pub 100-02 Medicare Benefit Policy: Cardiac Rehabilitation and Intensive Cardiac Rehabilitation (section 42 CF R 410.49) CR 6850, effective January 1. 2010.

Centers for Medicare and Medicaid Services, National Coverage Determination for Cardiac Rehabilitation Programs (CAG 00089R), effective March 22, 2006. Retrieved from the World Wide Web on December 11, 2007 @ http://www.cms.hhs.gov/med/viewdecisionmemo.asp?id=164

European Association of Cardiovascular Prevention and Rehabilitation Committee for Science Guidelines, (2010, August). Secondary prevention through cardiac rehabilitation: physical activity counseling exercise training: key components of the position paper from the Cardiac Rehabilitation Section of the European Association of Cardiovascular Prevention and Rehabilitation. *Eur Heart J.,* 31(16):1967-74.

Fukui, S., Ogo, T., Takaki, H., Ueda, J., Tsuji, A., Morita, Y. … & Goto, Y. (2016, May). Efficacy of cardiac rehabilitation after balloon pulmonary angioplasty for chronic thromboembolic pulmonary hypertension. *Heart*, pii: heartjnl-2015-309230. Doi: 10.1136/heartjnl-2015-309230.

Grace, S., Gravely-Witt, S., Brual, J, et al (2008, October). Contribution of patient and physician factors to cardiac rehabilitation referral: a prospective multilevel study. *Nat Clin Pract Cardiovasc Med.* 5(10):653-62.

Hammill, B.G., Curtis L.H., Schulman, K.A., Whellan, D.J., 2010, January). Relationship between cardiac rehabilitation and long-term risks of death and myocardial infarction among elderly Medicare beneficiaries. *Circulation,* 121(1):63-70.

Hayes Medical Technology Directory. (2018, February; 2020, May). Comparative effectiveness review of intensive cardiac rehabilitation programs for coronary artery disease. February 22, 2018. Lansdale, PA: Hayes, Inc.

Hayes Search & Summary. (2017, July; 2018, February- archived). Intensive cardiac rehabilitation programs for coronary artery disease. July 7, 2017. Lansdale, PA: Hayes, Inc.

Health Care Financing Administration. (1989, August). Cardiac rehabilitation programs. *Medicare Coverage Issues Manual,* 35-25 [On-line]. Retrieved March 2002, from the World Wide Web: http://www.hcfa.gov/pubforms/06_cim/ci35.htm#_1_3

Long, L., Mordi, I. R., Bridges, C., Sagar, V. A., Davies, E. J., Coats, A. J., Dalal, H., Rees, K., Singh, S. J., & Taylor, R. S. (2019). Exercise-based cardiac rehabilitation for adults with heart failure. *The Cochrane Database of Systematic Reviews*, 1(1), CD003331. https://doi.org/10.1002/14651858.CD003331

Nilsson, B. B., Lunde, P., Grøgaard, H. K., Holm, L. (2018, January). Long-term results of high-intensity exercise-based cardiac rehabilitation in revascularized patients for symptomatic coronary artery disease. *The American Journal of Cardiology*. Doi: 10.1016/j.amjcard.2017.09.011.

Pinto, B.M., Goldstein, M.G., Papandonatos, G.D., Farrell, N., Tilkemeier, P., Marcus, B.H., Todaro, J.F., (2011, September). Maintenance of exercise after phase II cardiac rehabilitation: a randomized controlled trial. *Am J Prev Med,* 41(3):274-83.

Prior, P.L., Hachinski, V., Unsworth, K., Chan, R., Mytka, S., O'Callaghan, C., Suskin, N., (2011, November). Comprehensive cardiac rehabilitation for secondary prevention after transient ischemic attack or mild stroke: I: feasibility and risk factors. *Stroke,* 42(11):3207-13.

Schopfer, D.W., Rush, K.M., Rohrbach, G., Hasara, S., Bettencourt, M.S., Pabst, M.S., & Whooley, M. (2015, March). The healthy heart cardiac rehabilitation program. *Journal of the American College of Cardiology*, Volume 65, Issue 10_S, Retrieved from http://content.onlinejacc.org/article.aspx?articleid=2198815&_ga=1.72824657.31369211.1464366455

Singh, V., Schocken, D., Williams, K., Stamey, R. (2008, September). *Cardiac Rehabilitation.* Retrieved February 4, 2010 from the World Wide Web: http://emedicine.medscape.com/article/319683-print

Sumner, J., Harrison, A., Doherty, P., (2017, May). The effectiveness of modern cardiac rehabilitation: A systematic review of recent observational studies in non-attenders versus attenders. *PLoS One*. Retrieved from World Wide Web on July 2, 2018 from https://doi.org/10.1371/journal.pone.0177658.

Taylor, R.S., Sagar, V.A., Davies, E.J., Briscoe, S., Coats, A., Dalal, H., ... Singh, S. (2014). Exercise-based rehabilitation for heart failure. The Cochrane Library, CD003331.pub4. Retrieved from http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD003331.pub4/abstract

UptoDate. April 2019. Cardiac rehabilitation: Indications, efficacy, and safety in patients with coronary heart disease. Authors: Wenger, N.K., Rosenson,R.S., Braun, L.T.

Zhang, Y., Cao, H., Jiang, P., Tang, H. (2018, February). Cardiac rehabilitation in acute myocardial infarction patients after percutaneous coronary intervention: A community-based study. *Medicine.* Doi: 10.1097/MD.0000000000009785.

Zullo, M.D., Jackson, L.W., Whalen, C.C., Dolansky, M.A., (Evaluation of the recommended core components of cardiac rehabilitation practice: an opportunity for quality improvement. *J Cardiopulm Rehabil Prev,* 32(1):32-40.