Medical Director Responsibilities for Outpatient Cardiac Rehabilitation/Secondary Prevention Programs : A Scientific Statement From the American Heart Association/American Association for Cardiovascular and Pulmonary Rehabilitation

Marjorie L. King, Mark A. Williams, Gerald F. Fletcher, Neil F. Gordon, Meg Gulanick, Carl N. King, Arthur S. Leon, Benjamin D. Levine, Fernando Costa and Nanette K. Wenger

Circulation. 2005;112:3354-3360
doi: 10.1161/CIRCULATIONAHA.105.170333
Circulation is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231

Print ISSN: 0009-7322. Online ISSN: 1524-4539

AHA/AACVPR Scientific Statement

Medical Director Responsibilities for Outpatient Cardiac Rehabilitation/Secondary Prevention Programs

A Scientific Statement From the American Heart Association/American Association for Cardiovascular and Pulmonary Rehabilitation

Marjorie L. King, MD, Co-Chair; Mark A. Williams, PhD, Co-Chair; Gerald F. Fletcher, MD; Neil F. Gordon, MD, PhD; Meg Gulanick, PhD, RN; Carl N. King, EdD; Arthur S. Leon, MD; Benjamin D. Levine, MD; Fernando Costa, MD; Nanette K. Wenger, MD

Outpatient cardiac rehabilitation/secondary prevention programs are characterized by comprehensive services, including medical evaluation, prescribed exercise, and cardiovascular disease risk factor modification through evidence-based pharmacological management of risk factors and behavioral interventions. This multifactorial process is designed to limit the adverse physiological and psychological effects of cardiac illness, to reduce the risk of sudden death or reinfarction, to control cardiac symptoms, to stabilize or reverse the atherosclerotic process, and to enhance the patient's psychosocial and vocational status.[1] Provision of these services is physician directed and implemented by a team of healthcare professionals that may include nurses, exercise physiologists, dietitians, health educators, behavioral medicine specialists, and other healthcare professionals.[2]

Appropriate patient/physician interaction during cardiac rehabilitation is important from a clinical and a regulatory perspective. In practice, the cardiac rehabilitation team interacts with a patient multiple times per week, providing an opportunity to facilitate management of blood pressure and lipids, glycemic control, smoking cessation, medication compliance, and adherence to lifestyle modification. Although long-term management of these issues is the responsibility of the primary care physician and/or cardiologist, cardiac rehabilitation provides an opportunity for concentrated risk factor modification during a critical period for the patient with coronary heart disease. By working closely with referring physicians, the cardiac rehabilitation team can assist the patient in reaching target goals more efficiently. The medical director is ultimately responsible for ensuring that systems are in place to facilitate this process and that appropriate communication with referring physicians is maintained.

This document will serve as a guide for the medical director of an outpatient cardiac rehabilitation/secondary prevention program to link the clinical aspects of physician involvement to the provision of services by program staff while maintaining compliance with regulatory requirements. It is not meant to replicate the excellent reviews, practical guidelines, and scientific statements published elsewhere[3–7] that describe the rationale for and detailed structure of comprehensive cardiac rehabilitation programs. Rather, it provides an overview of specific responsibilities for the medical director of an outpatient cardiac rehabilitation and secondary prevention program. Patient participation in this programming is frequently the first step in developing a lifelong commitment to the secondary prevention of coronary heart disease.

Medical Director as Team Leader

The primary role of the medical director, as leader of the multidisciplinary team, is to ensure that the cardiac rehabilitation/secondary prevention program is safe, comprehensive, cost-effective, and medically appropriate for individual patients. The medical director should have expertise in cardiovascular disease management and secondary prevention, training and experience with exercise training of patients with heart disease, and interpersonal skills related to leading and participating in a multidisciplinary team.

The medical director's responsibilities relate primarily to oversight of program policies and procedures but may include specific responsibilities for patient evaluation, management,

The American Heart Association makes every effort to avoid any actual or potential conflicts of interest that may arise as a result of an outside relationship or a personal, professional, or business interest of a member of the writing panel. Specifically, all members of the writing group are required to complete and submit a Disclosure Questionnaire showing all such relationships that might be perceived as real or potential conflicts of interest.

This statement was approved by the American Heart Association Science Advisory and Coordinating Committee on August 26, 2005. A single reprint is available by calling 800-242-8721 (US only) or writing the American Heart Association, Public Information, 7272 Greenville Ave, Dallas, TX 75231-4596. Ask for reprint No. 71-0337. To purchase additional reprints: up to 999 copies, call 800-611-6083 (US only) or fax 413-665-2671; 1000 or more copies, call 410-528-4121, fax 410-528-4264, or e-mail kgray@lww.com. To make photocopies for personal or educational use, call the Copyright Clearance Center, 978-750-8400.

This statement has been copublished in the *Journal of Cardiopulmonary Rehabilitation*.

Expert peer review of AHA Scientific Statements is conducted at the AHA National Center. For more on AHA statements and guidelines development, visit http://www.americanheart.org/presenter.jhtml?identifier=3023366.

(*Circulation*. 2005;112:3354-3360.)

Circulation **is available at http://www.circulationaha.org** **DOI: 10.1161/CIRCULATIONAHA.105.170333**

and supervision. In many instances, a program director/manager and staff, under the direction of the medical director, are responsible for much of the daily program operations. With input from other members of the team, the medical director should oversee and provide direction in the processes of program development, on-going quality improvement, and clinical operations; patient referral; patient evaluation and goal development; program monitoring and exercise supervision; and strategies to facilitate compliance with reimbursement regulations.

Program Development and Operations

The medical director must directly participate in the processes of program development in the case of new programs; subsequent evaluation of program effectiveness, efficiency, and modification; and oversight of program operations. The medical director should ensure that policies and procedures are consistent with evidence-based guidelines and comply with regulatory and certification standards[8–19]; ensure that appropriate staffing is available; and recognize local, regional, and national regulations for and issues pertaining to reimbursement for services.

Patient Referral

All patients must be referred to the cardiac rehabilitation/secondary prevention program by a physician (or appropriate designee, ie, advanced nurse practitioner or physician assistant) who is licensed to practice medicine in the state in which the program is offered. The medical director is responsible for all policies related to the referral of appropriate patients, including inclusion and exclusion criteria, policies related to patients whose diagnoses do not allow for reimbursement of cardiac rehabilitation services, and policies for the uninsured. The medical director must also recognize that cardiac rehabilitation and secondary prevention services are underused, particularly for minorities, women, and the elderly.[20] The medical director's emphasis on the value of these services for all potential candidates as an extension of the referring physician's care will enhance the referral process while underscoring the continued involvement of the referring physician.[21]

Inclusion Criteria

Currently, Medicare regulations, which may also serve as an informal guideline for some other third-party payers, limit coverage for cardiac rehabilitation to the following diagnoses: post–myocardial infarction, post–coronary artery bypass surgery, and stable angina, with specified requirements and documentation for each. However, covered diagnoses may vary among payers, and when policies suggest that a particular diagnosis will not be covered, most carriers have an appeal process that may result in coverage. Of note is the growing scientific evidence for the inclusion of patients who have compensated heart failure or have undergone cardiac transplantation and patients who have undergone percutaneous coronary intervention; thus, there is increasing likelihood that such patients may already be or may become eligible for reimbursement by many providers.[22,23] In addition, many stable patients are likely to benefit from not only exercise training but other aspects of behavior modification, including comprehensive and intensive risk factor reduction.

Exclusion Criteria

In general, patients with the following conditions should be excluded from the exercise training component of cardiac rehabilitation until these concerns can be resolved[3]: unstable angina; class IV heart failure; uncontrolled sustained tachyarrhythmias or bradyarrhythmias; severe and symptomatic aortic or mitral stenosis; hypertrophic obstructive cardiomyopathy; severe pulmonary hypertension; and other conditions that could be aggravated by exercise such as resting systolic blood pressure >200 mm Hg or resting diastolic blood pressure >110 mm Hg, active or suspected myocarditis or pericarditis, thrombophlebitis, and recent significant systemic or pulmonary embolus.

Initial Evaluation and Goal Development

The medical director should ensure that systems are present to obtain the following clinical information so that the cardiac rehabilitation team can develop an appropriate patient-centered treatment plan:

- Results of recent cardiac tests, including exercise and pharmacological stress testing, with particular attention to inducible myocardial ischemia, coronary anatomy, left ventricular function, arrhythmias, and concomitant valvular disease.
- Status of cardiopulmonary, orthopedic, and neuromuscular systems, as well as pain status, cognitive function, and psychological stressors.
- Patient-specific symptoms of angina or anginal equivalents.
- Detailed review of cardiovascular disease risk factors and their management.
- Complete list of medications, including all over-the-counter medications, supplements, and herbs; dosing intervals; and suspected adherence to the drug regimen.
- Comorbid conditions such as pulmonary, endocrine (especially diabetes), renal, and neurological illnesses; behavioral concerns; and musculoskeletal conditions, with attention to their impact on exercise, adherence, and disease progression.
- Pertinent psychosocial (eg, depression, anger/hostility, social isolation, type A behavior) and occupational history.
- Baseline resting ECG, with attention to heart rate and rhythm, conduction abnormalities, and evidence of prior myocardial infarction.

Results from the initial evaluation must be documented to reflect the patient's current status and to guide the development and implementation of a patient-specific treatment plan that prioritizes goals and outlines intervention strategies for exercise training, tactics to reduce cardiovascular disease risk, and a follow-up plan that reflects progress toward goals and guides long-term secondary prevention strategies.

The American Heart Association guidelines for comprehensive secondary prevention[9,17] and those of the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR) provide a useful framework for evaluation and management.[3] This information also is useful in risk-stratifying patients for disease progression and the likelihood

of future cardiac events and adverse cardiac events during exercise training that might determine whether exercise is contraindicated and the level of medical supervision and monitoring recommended during the initial training period.

Comprehensive cardiac rehabilitation/secondary prevention programs should address each of the core components previously described by the AHA and AACVPR,[24] including nutritional counseling; lipid, hypertension, and diabetes management; cessation of tobacco use; weight management; psychosocial management; physical activity counseling; and exercise training. As physicians address the medical issues related to these core components, participation of patients in cardiac rehabilitation programs provides the framework for lifelong behavioral change and enables patients to meet target goals.

Initial patient evaluation and goal development is a team process that involves the patient, referring physician, and cardiac rehabilitation clinicians but is coordinated by the program's medical director. Patient outcomes that reflect progress toward goals should be documented and tracked to identify specific areas that require further intervention and monitoring. Findings and recommendations resulting from the initial evaluation should be communicated to both the patient and the primary healthcare provider to develop strategies to support long-term goals. Tracking of progress toward these goals can be incorporated into both individual patient reports and composite reports for performance improvement projects. Sample forms that can be adapted for these purposes are available in several ACC/AHA and AACVPR documents.[25,26] At discharge from cardiac rehabilitation, a summary of patient progress toward goals should be communicated to the patient's referring physician.

Exercise Supervision and Program Monitoring

Regulatory issues related to exercise supervision and program monitoring of the early outpatient cardiac rehabilitation/secondary prevention program (formerly known as phase II) continue to be in flux. The original regulations for the oversight of exercise supervision and program monitoring are described in the Medicare coverage guidelines 35–25 for cardiac rehabilitation (exercise supervision)[2] and the *Medicare Carriers Manual*, part 3, Claims Process, Section 2050.1, Incident to Physician's Professional Services (program monitoring).[27] There is some ambiguity in these regulations related to physician involvement and supervision of exercise sessions, which has led to confusion in the industry, variability in local contractor decision policies, and ultimately to an Office of the Inspector General (OIG) audit of programs beginning in 2003. The final OIG report to the Centers for Medicare and Medicaid Services (CMS) recommended that CMS clarify national Medicare cardiac rehabilitation coverage requirements on (1) the provision of direct physician supervision and (2) the physician (referring or hospital) whose professional services the cardiac rehabilitation must be "incident to."[28] The remainder of this section offers insight into these regulatory issues from a clinical perspective and provides guidance for cost-effective physician involvement while complying with current regulatory requirements.

Exercise Supervision

Supervision of the exercise program must be provided by personnel who are capable of conducting the program safely and effectively. All staff must have successfully completed a course in basic life support techniques and possess experience in exercise training for patients with coronary heart disease. Staff members who are responsible for advanced cardiac life support must have successfully completed the appropriate training course and be credentialed to provide such services. Services provided by nonphysician personnel must be furnished under the direct supervision of a physician. According to current CMS regulations, direct physician supervision of exercise must also be provided; ie, a physician must be in the area of the exercise program and immediately available and accessible in case of an emergency at all times while the exercise program is being conducted.[2] They do not require that a physician be physically present in the exercise room itself, provided that the physician is not too remote from the exercise area to be considered immediately available and accessible.[2,27]

The issue of physician proximity to the exercise area is one of contention and confusion. Many of the individual OIG reports state that physician supervision is assumed to be met in a hospital setting, with the caveat that the supervising physician cannot be geographically remote or involved in an activity that would preclude prompt response.[29] However, others state that reliance on a hospital code team or emergency room physician does not meet the criteria for direct supervision.[29] The final OIG report recognizes both sets of practice with respect to provision of direct supervision, with a recommendation that CMS (1) clarify national Medicare cardiac rehabilitation coverage requirements on the provision of direct physician supervision and the physician (referring or hospital) whose professional services the cardiac rehabilitation must be "incident to" and (2) direct fiscal intermediaries to educate hospitals on the clarified national Medicare coverage policy for outpatient cardiac rehabilitation services.[28] The most recent AACVPR guidelines suggest that physician supervision be defined by timeliness rather than proximity.[3]

It is imperative to maintain documentation of supervising physician participation and response time. In addition, the medical director should ensure that program staff include advanced cardiac life support–trained personnel capable of rendering appropriate medical care in both emergent and nonemergent instances. Depending on the facility policy approved by the medical director, standing orders may be in place to allow appropriately trained cardiac rehabilitation personnel to administer various levels of care in specifically delineated circumstances. Regular practice of emergency procedures should be conducted and documented.

Program Monitoring

Like many other therapeutic services, cardiac rehabilitation does not have a specific benefit category within Medicare law. These services are reimbursed under the nonspecific "incident to physician services" benefit category. "Incident to" services are designed to support and ensure the level of patient care during the course of treatment by the physician responsible for the patient's care. In the context of cardiac

rehabilitation, this support includes fostering adherence to strategies to address cardiovascular disease risk factors such as dyslipidemia, hypertension, and hyperglycemia, including medication regimens and increasing functional capacity and promoting adherence to lifestyle modification. Behavioral counseling directed at appropriate diet and weight management based on the therapeutic lifestyle change diet[11] and smoking cessation is also essential.

From a regulatory perspective, to be considered "incident to" a physician's professional services, Medicare requires, in part, that the services or supplies are furnished as an integral, although incidental, part of the physician's personal professional services in the course of diagnosis or treatment of an injury or illness. The benefit does not require that a physician perform a personal professional service on each occasion of service by a nonphysician. However, during any course of treatment by auxiliary personnel, the physician must personally see the patient periodically and often enough to assess the course of treatment and the patient's progress and, when necessary, to change the treatment program.[27] Although the nonphysician program staff typically is responsible for providing cardiac rehabilitation and secondary prevention services, there must be evidence that a physician regularly participates in the management of the patient's care during this time to meet the "incident to" a physician's professional services. It is inappropriate for a patient to participate in an 8- to 12-week program of outpatient cardiac rehabilitation and not see a physician to assess the course of treatment and, when necessary, adjust the treatment plan. Such an approach does not meet existing Medicare requirements for "incident to" services. Physician participation in the management of patients as a part of cardiac rehabilitation programming must be documented.

At this time, CMS has not provided guidelines as to the frequency with which face-to-face patient-physician visits should occur to meet the "incident to physician" regulatory requirements. The recommendation of this writing group is that such interactions take place at least once midway through an 8- to 12-week period of early outpatient rehabilitation.

Some controversy remains regarding which specific physician(s) would be eligible to provide these services, eg, the program medical director, designated program-affiliated physician, and/or the patient's primary care physician, cardiologist, or other referring physician. Because no guideline exists, program staff must document these "incident to" visits and obtain records pertaining to such visits, paying particular attention to examples that reflect interaction between physicians and program staff related to patient care. If the encounter is with the program's medical director, documentation is simple, whereas documentation of an encounter with the beneficiary's referring cardiologist or primary care physician becomes more complex.

Finally, what might be appropriate for "incident to" in one geographic area might not match the practice in another area. It is also important to be familiar with any specific requirements identified by the local fiscal intermediary in its local coverage decision, including those related to billing and documentation.

Alternative Delivery Models

When patients do not participate in traditional outpatient cardiac rehabilitation programming, the medical director, in conjunction with the program staff, should identify and consider alternative mechanisms for providing long-term supervision. Several models hold promise both as an alternative to traditional outpatient cardiac rehabilitation programming and for the provision of ongoing supervision after completion of a traditional program. These models include nurse-coordinated care management programs[30]; self-directed individual patient monitoring with various tools (which can be evaluated by the physician periodically) to record adherence to exercise, diet, medication regimen, and other risk interventions[31]; and community-based group follow-up with nurses and other allied healthcare providers to assist patients in maintaining adherence.[32] Regardless of the mechanism for supervision, the program medical director must emphasize at every opportunity the importance of the patient's commitment to these efforts. This long-term commitment will decrease the risk of secondary events while significantly improving general health and well-being.[33]

Summary and Conclusions

Lifelong adherence to regular physical activity, a heart-healthy diet, a prescribed medication regimen, and smoking cessation is needed to maintain the benefits of cardiac rehabilitation/secondary prevention programs. Monitoring patient progress toward achieving goals is a responsibility of the medical director and staff of the cardiac rehabilitation/secondary prevention program. Close interaction with the patient's primary care provider, cardiologist, or cardiovascular surgeon who cares for the patient's cardiovascular health is essential. Cardiac rehabilitation/secondary prevention programs play a pivotal role in fostering a patient's commitment to lifestyle modification, but individual patient–physician interaction linked to evidence-based guidelines is key to maintaining this process. Medical directors of cardiac rehabilitation/secondary prevention programs are uniquely positioned to ensure that secondary prevention programs function effectively to improve quality of care for patients with cardiovascular disease.

The interactive role of the multiple physicians and team members involved in the patient's care cannot be overemphasized in the process of cardiac rehabilitation and secondary prevention. The active leadership of the program medical director is key. The medical director's role is pivotal in the development and implementation of program policies and procedures and in ensuring that appropriate patient assessments are completed, that an individualized plan of care for each patient is developed, that the program is safe, and that patient and program outcomes are consistent with current clinical practice standards. Optimal outcomes of cardiac rehabilitation/secondary prevention rely on a multidisciplinary rehabilitation team approach with strong leadership and direction provided by the program medical director.

Writing Group Disclosures

Writing Group Member	Employment	Research Grant	Other Research Support	Speakers Bureau/Honoraria	Ownership Interest	Consultant/ Advisory Board	Other
Marjorie L. King	Columbia University, Helen Hayes Hospital	None	None	None	None	American Healthways	None
Mark A. Williams	Creighton University School of Medicine	None	None	None	None	None	None
Gerald F. Fletcher		None	None	None	None	None	None
Neil F. Gordon	Intervent USA	None	None	Astra Zeneca; Merck; Schering-Plough; KOS	Intervent USA	None	None
Meg Gulanick		None	None	None	None	None	None
Carl N. King	Mission Hospitals	None	None	None	None	None	None
Arthur S. Leon	None	None	None	None	None	None	None
Benjamin D. Levine	University of Texas Southwestern/ Presbyterian Hospital	None	None	None	None	None	None
Fernando Costa	American Heart Association	None	None	None	None	None	None
Nanette K. Wenger	Emory University School of Medicine	Eli Lilly; AstraZeneca	None	Pfizer Inc; Novartis; Merck; Bristol-Myers Squibb; Eli Lilly and Co	None	Eli Lilly Raloxifene Advisory Committee Heart Disease in Women; MED-ED; Pfizer; Cardiology/Lipidology Advisory Board, Merck; Bristol Myers Squibb; Ranolazine Advisory Board, CV Therapeutics, Inc; Sanofi-Synthelabo, Inc; Kos Pharmaceuticals, Inc; NitroMed Heart Failure Advisory Board	Data Safety Monitoring Board, Steering Committee, Pfizer, Inc

This table represents the relationships of writing group members that may be perceived as actual or reasonably perceived conflicts of interest as reported on the Disclosure Questionnaire, which all members of the writing group are required to complete and submit.

Reviewers' Disclosures

Reviewer	Employment	Research Grant	Other Research Support	Speakers Bureau/Honoraria	Ownership Interest	Consultant/Advisory Board	Other
Gary Balady	Boston University Medical Center	None	None	None	None	None	None
Kathy Berra	Stanford University School of Medicine	None	None	None	None	None	None
Barbara Fletcher	University of North Florida	None	None	None	None	None	None
Barry Franklin	William Beaumont Hospital	None	None	Pfizer	None	None	None
Marian Limacher	University of Florida	None	None	Kos Pharmaceuticals	None	None	None
Paul Thompson	Hartford Hospital	Otsuka; Merck; Pfizer; AstraZeneca; Schering Plough; Kos	None	Merck; Pfizer; Schering Plough; AstraZeneca; Bristol Myers Squibb; Reliant; Kos; Sanyko	Pfizer; Schering Plough; Zoll; Merck	Merck; Pfizer; AstraZeneca; Schering Plough; Squibb	None

This table represents the relationships of reviewers that may be perceived as actual or reasonably perceived conflicts of interest as reported on the Reviewer Disclosure Questionnaire, which all reviewers are required to complete and submit.

References

1. Wenger NK, Froelicher ES, Ades PA, Berra K, Blumenthal JA, Certo CME, Dattilo AM, Davis D, DeBusk RF, Drozda JP, Fletcher BJ, Franklin BA, Gaston H, Greenland P, McBride PE, McGregor CGA, Oldridge NB, Piscatella JC, Rogers FJ. *Cardiac Rehabilitation: Clinical Practice Guideline No. 17*. Rockville, Md: US Department of Health and Human Services, Public Health Service, Agency for Health Care Policy and Research, and the National Heart, Lung, and Blood Institute; October 1995. AHCPR Publication No. 96–0672.
2. United States Department of Health and Human Services, Health Care Financing Administration. Payment for services furnished to patients in hospital based and free standing cardiac rehabilitation clinics. *Fed Reg*. 1982;41:934.
3. Williams MA, Balady GJ, Carlson JJ, Comoss P, Humphrey R, Lounsbury PF, Roitman JL, Southard DR. *AACVPR Guidelines for Cardiac Rehabilitation and Secondary Prevention Programs*. 4th ed. Champaign, Ill: Human Kinetics; 2004.
4. Fletcher GF, Balady GJ, Amsterdam EA, Chaitman B, Eckel R, Fleg J, Froelicher VF, Leon AS, Pina IL, Rodney R, Simons-Morton DA, Williams MA, Bazzarre T. Exercise standards for testing and training: a statement for healthcare professionals from the American Heart Association. *Circulation*. 2001;104:1694–1740.
5. Leon AS, Franklin BA, Costa F, Balady GJ, Berra KA, Stewart KJ, Thompson PD, Williams MA, Lauer MS, for the American Heart Association; Council on Clinical Cardiology (Subcommittee on Exercise, Cardiac Rehabilitation, and Prevention); Council on Nutrition, Physical Activity, and Metabolism (Subcommittee on Physical Activity); and American Association of Cardiovascular and Pulmonary Rehabilitation. Cardiac rehabilitation and secondary prevention of coronary heart disease: an American Heart Association Scientific Statement from the Council on Clinical Cardiology (Subcommittee on Exercise, Cardiac Rehabilitation, and Prevention) and the Council on Nutrition, Physical Activity, and Metabolism (Subcommittee on Physical Activity), in Collaboration With the American Association of Cardiovascular and Pulmonary Rehabilitation. *Circulation*. 2005;111:369–376.
6. Gibbons RJ, Abrams J, Chatterjee K, Daley J, Deedwania PC, Douglas JS, Ferguson TB Jr, Fihn SD, Fraker TD Jr, Gardin JM, O'Rourke RA, Pasternak RC, Williams SV, Gibbons RJ, Alpert JS, Antman EM, Hiratzka LF, Fuster V, Faxon DP, Gregoratos G, Jacobs AK, Smith SC Jr, for the American College of Cardiology, American Heart Association Task Force on Practice Guidelines, Committee on the Management of Patients With Chronic Stable Angina. ACC/AHA 2002 guideline update for the management of patients with chronic stable angina: summary article: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on the Management of Patients With Chronic Stable Angina). *Circulation*. 2003;107:149–158.
7. Hunt SA, Abraham WT, Chin MH, Feldman AM, Francis GS, Ganiats TG, Jessup M, Konstam MA, Mancini DM, Michl K, Oates JA, Rahko PS, Silver MA, Stevenson LW, Yancy CW, Antman EM, Smith SC Jr, Adams CD, Anderson JL, Faxon DP, Fuster V, Halperin JL, Hiratzka LF, Hunt SA, Jacobs AK, Nishimura R, Ornato JP, Page RL, Riegel B. ACC/AHA 2005 guideline update for the diagnosis and management of chronic heart failure in the adult: summary article: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Writing Committee to Update the 2001 Guidelines for the Evaluation and Management of Heart Failure): developed in collaboration with the American College of Chest Physicians and the International Society for Heart and Lung Transplantation: endorsed by the Heart Rhythm Society. *Circulation*. 2005;112:1825–1852.
8. American Diabetes Association. Evidence-based nutrition principles and recommendations for the treatment and prevention of diabetes and related complications. *Diabetes Care*. 2002;25(suppl 1):S50–S60.
9. Smith SC Jr, Blair SN, Bonow RO, Brass LM, Cerqueira MD, Dracup K, Fuster V, Gotto A, Grundy SM, Miller NH, Jacobs A, Jones D, Krauss RM, Mosca L, Ockene I, Pasternak RC, Pearson T, Pfeffer MA, Starke RD, Taubert KA. AHA/ACC Scientific Statement: AHA/ACC guidelines for preventing heart attack and death in patients with atherosclerotic cardiovascular disease: 2001 update: a statement for healthcare professionals from the American Heart Association and the American College of Cardiology. *Circulation*. 2001;104:1577–1579.
10. Chobanian AV, Bakris GL, Black HR, Cushman WC, Green LA, Izzo JL Jr, Jones DW, Materson BJ, Oparil S, Wright JT Jr, Roccella EJ, for the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure; National Heart, Lung, and Blood Institute; National High Blood Pressure Education Program Coordinating Committee. Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. *Hypertension*. 2003;42:1206–1252.
11. National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III). Third report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III): final report. *Circulation*. 2002;106:3143–3421.
12. Franklin BA, ed. *ACSM's Guidelines for Graded Exercise Testing and Prescription*. 6th ed. Baltimore, Md: Williams & Wilkins; 2000.
13. Joint Commission on Accreditation of Healthcare Organizations. *Hospital*. Available at: http://www.jcaho.org/htba/hospitals/index.htm. Accessed September 27, 2005.
14. Joint Commission on Accreditation of Healthcare Organizations. *Ambulatory Care*. Available at: http://www.jcaho.org/htba/ambulatory+care/index.htm. Accessed September 27, 2005.
15. Commission on Accreditation of Rehabilitation Facilities. Medical rehabilitation. Available at: http://www.carf.org/CARF/MedicalRehab.htm. Accessed September 27, 2005.
16. National Committee for Quality Assurance. *Health Plan Employer Data and Information Set (HEDIS)*. Available at: http://www.ncqa.org. Accessed September 27, 2005.
17. Mosca L, Appel LJ, Benjamin EJ, et al. Evidence-based guidelines for cardiovascular disease prevention in women. *Circulation*. 2004;109:672–693.
18. Williams MA, Fleg JL, Ades PA, Chaitman BR, Miller NH, Mohiuddin SM, Ockene IS, Taylor CB, Wenger NK; American Heart Association Council on Clinical Cardiology Subcommittee on Exercise, Cardiac Rehabilitation, and Prevention. Secondary prevention of coronary heart disease in the elderly (with emphasis on patients ≥75 years of age): an American Heart Association scientific statement from the Council on Clinical Cardiology Subcommittee on Exercise, Cardiac Rehabilitation, and Prevention. *Circulation*. 2002;105:1735–1743.
19. Ades PA. Cardiac rehabilitation and secondary prevention of coronary heart disease. *N Engl J Med*. 2001;345:892–902.
20. Ades PA, Kottke TE, Miller NH, McGrath JC, Record NB, Record SS. Task force #3: getting results: who, where, and how? 33rd Bethesda Conference. *J Am Coll Cardiol*. 2002;40:615–630.
21. Bairey Merz CN, Mensah GA, Fuster V, Greenland P, Thompson PD. Task force #5: the role of cardiovascular specialists as leaders in prevention: from training to champion: 33rd Bethesda Conference. *J Am Coll Cardiol*. 2002;40:641–649.
22. Pina IL, Apstein CS, Balady GJ, Belardinelli R, Chaitman BR, Duscha BD, Fletcher BJ, Fleg JL, Myers JN, Sullivan MJ, for the American Heart Association Committee on Exercise, Rehabilitation, and Prevention. Exercise and heart failure: a statement from the American Heart Association Committee on Exercise, Rehabilitation, and Prevention. *Circulation*. 2003;107:1210–1225.
23. Stewart KJ, Badenhop D, Brubaker PH, Keteyian SJ, King M. Cardiac rehabilitation following percutaneous revascularization, heart transplant, heart valve surgery, and for chronic heart failure. *Chest*. 2003;123:2104–2111.
24. Balady GJ, Ades PA, Comoss P, Limacher M, Pina IL, Southard D, Williams MA, Bazzarre T. Core components of cardiac rehabilitation/secondary prevention programs: a statement for healthcare professionals from the American Heart Association and the American Association of Cardiovascular and Pulmonary Rehabilitation Writing Group. *Circulation*. 2000;102:1069–1073.
25. American College of Cardiology, American Heart Association, Physician Consortium for Performance Improvement. Clinical performance measures: chronic stable coronary artery disease. Available at: http://www.ama-assn.org/ama1/pub/upload/mm/370/cad-8–05.pdf. Accessed September 27, 2005.
26. Sanderson BK, Southard D, Oldridge N, for the Writing Group. AACVPR consensus statement: outcomes evaluation in cardiac rehabilitation/secondary prevention programs: improving patient care and program effectiveness. *J Cardiopulm Rehabil*. 2004;24:68–79.
27. Centers for Medicare and Medicaid Services. Coverage and limitations. Available at: http://www.cms.hhs.gov/manuals/14_car/3b2049.asp#_2050_1. Accessed September 27, 2005.
28. Department of Health and Human Services, Office of Inspector General. Review of Medicare outpatient cardiac rehabilitation provided by hos-

pitals. Available at: http://oig.hhs.gov/oas/reports/region5/50300102.htm. Accessed September 27, 2005.
29. Centers for Medicare and Medicaid Services. Review of outpatient cardiac rehabilitation services 2004 reports. Available at: http://www.oig.hhs.gov/oas/reading/cms04.html. Accessed September 27, 2005.
30. Haskell WL. Cardiovascular disease prevention and lifestyle interventions: effectiveness and efficacy. *J Cardiovasc Nurs*. 2003;18:245–255.
31. Southard BH, Southard DR, Nuckolls J. Clinical trial of an Internet-based case management system for secondary prevention of heart disease. *J Cardiopulm Rehabil*. 2003;23:341–348.
32. Harris DE, Record NB. Cardiac rehabilitation in community settings. *J Cardiopulm Rehabil*. 2003;23:250–259.
33. Ockene IS, Hayman LL, Pasternak RC, Schron E, Dunbar-Jacob J. Task force #4: adherence issues and behavior changes: achieving a long-term solution: 33rd Bethesda Conference. *J Am Coll Cardiol*. 2002;40:630–640.

KEY WORDS: AHA Scientific Statements ■ prevention ■ rehabilitation ■ heart diseases ■ exercise ■ risk factors