THE NATIONAL QUALITY FORUM

COMPOSITE MEASURE SUBMISSION FORM
Version 4.1 January 2010

This form will be used by stewards to submit **composite** measures and by reviewers to evaluate the measures.

Measure Stewards: Check with NQF staff before using this form. Complete all non-shaded areas of the form. All requested information should be entered directly into this form. The information requested is directly related to NQF's composite measure evaluation criteria and will be used by reviewers to determine if the evaluation criteria have been met. The specific relevant subcriteria language is provided in a Word comment within the form and will appear if your cursor is over the highlighted area (or in balloons).

The measure steward has the opportunity to identify and present the information that demonstrates the measure meets the criteria. Additional materials will only be considered supplemental. Do not rely solely on materials provided at URLs or in attached documents to provide measure specifications or to demonstrate meeting the criteria. If supplemental materials are provided, be sure to indicate specific page numbers/ web page locations for the relevant information (web page links preferred).

For questions about completing this form, contact the project director at 202-783-1300. Please email this form to the appropriate contact listed in the corresponding call for measures.

TAP/Workgroup (if utilized)**:** Complete all yellow highlighted areas of the form. Evaluate the extent to which each subcriterion is met. Based on your evaluation, summarize the strengths and weaknesses in each section.

Note: *If there is no TAP or workgroup, the SC also evaluates the subcriteria (yellow highlighted areas).*

Steering Committee: Complete all pink highlighted areas of the form. Review the workgroup/TAP assessment of the subcriteria, noting any areas of disagreement; then evaluate the extent to which each major criterion is met; and finally, indicate your recommendation for the endorsement. Provide the rationale for your ratings.

Evaluation ratings of the extent to which the criteria are met
C = Completely (unquestionably demonstrated to meet the criterion)
P = Partially (demonstrated to partially meet the criterion)
M = Minimally (addressed BUT demonstrated to only minimally meet the criterion)
N = Not at all (NOT addressed; OR incorrectly addressed; OR demonstrated to NOT meet the criterion)
NA = Not applicable (only an option for a few subcriteria as indicated)

(for NQF staff use) **NQF Review #:**
NQF Project:

De.1 Title of Measure: Cardiac Rehabilitation/Secondary Prevention (CR) Program Measurement Set to Assure Individualized Assessment and Evaluation of Modifiable Cardiovascular Risk Factors, Development of Individualized Interventions, and Communication With Other Health Care Providers.

De.2 Brief description of measure (*including type of score, measure focus, target population, time, e.g., Percentage of adult patients aged 18-75 years receiving one or more HbA1c tests per year*):
This measure evaluates whether a cardiac rehabilitation/secondary prevention program has processes in place for individualized assessment and evaluation of modifiable cardiovascular risk factors, development of individualized interventions, and communication with other health care providers.

De.3 Type of Measure:
☒ Composite with component measures combined at patient-level (e.g., all-or-none)
☐ Composite with component measures combined at aggregate-level

Select the most relevant priority area(s), quality domain(s), and consumer need(s).

De.4 National Priority Partners Priority Area ☒ patient and family engagement ☒ population health ☐

safety
☒ care coordination ☐ palliative and end of life care ☐ overuse

De.5 **IOM Quality Domain** ☒ effectiveness ☒ efficiency ☐ equity ☒ patient-centered ☒ safety ☐ timeliness

De.6 **Consumer Care Need** ☒ Getting Better ☒ Living With Illness ☒ Staying Healthy

CONDITIONS FOR CONSIDERATION BY NQF	
Four conditions must be met before proposed measures may be considered and evaluated for suitability as voluntary consensus standards:	**NQF Staff**
A. The measure is in the public domain or an intellectual property agreement (measure steward agreement) is signed. *Public domain only applies to governmental organizations. All non-government organizations must sign a measure steward agreement even if measures are made publicly and freely available.* A.1 **Do you attest that the measure steward holds intellectual property rights to the measure and the right to use any aspects of the measure owned by another entity (e.g., component measures, risk model, code set)?** ☒ Yes A.2 **Measure Steward Agreement** ☒ Signed and Submitted **OR** ☐ Government entity-public domain (If measure steward agreement not signed for non-government entities, do not submit) A.3 **Please check if either of the following apply:** ☐ Proprietary Measure ☐ Proprietary Complex Measure w/fees	**A** Y☐ N☐
B. The measure owner/steward verifies there is an identified responsible entity and process to maintain and update the measure on a schedule that is commensurate with the rate of clinical innovation, but at least every 3 years. B.1 ☒ Yes (If no, do not submit)	**B** Y☐ N☐
C. The intended use of the measure includes both public reporting and quality improvement. C.1 **Purpose:** ☒ Public reporting ☒ Internal quality improvement C.2 ☒ Accountability ☒ Accreditation ☒ Payment incentive ☐ Other, describe: (If not intended for both public reporting and quality improvement, do not submit)	**C** Y☐ N☐
D. The requested measure submission information is complete. Composite measures should be fully developed and tested so that all the evaluation criteria have been addressed and information needed to evaluate the measure is provided. D.1 **Testing:** ☒ Fully developed and tested (If composite measure not tested, do not submit) D.2 **Have NQF-endorsed measures been reviewed to identify if there are similar or related measures?** ☒ Yes (If no, do not submit) *If there are similar or related measures, be sure to address items 3b and 3c with specific information.* ►**Is all requested information entered into this form?** ☒ Yes (If no, do not submit)	**D** Y☐ N☐
De.7 If component measures of the composite **are aggregate-level measures, all** must be either NQF-endorsed or submitted for consideration for NQF endorsement (*check one*) ☐ All component measures are NQF-endorsed measures ☒ Some or all component measures are not NQF-endorsed and have been submitted using the online measure submission tool (If not, do not submit)	Y☐ N☐
(for NQF staff use) **Have all conditions for consideration been met?** Staff Notes to Steward (if submission returned):	**Met** Y☐ N☐
Staff Notes to Reviewers (issues or questions regarding any criteria):	
Staff Reviewer Name(s):	

Comment [KP1]: The individual measures included in the composite or subcomposite measures must be either:
NQF-endorsed;
OR
assessed to have met the individual measure evaluation criteria as the first step in evaluating the composite measure.
(This does not apply to subscales of a scale/instrument that cannot be used independently of the total scale.)

TAP/Workgroup Reviewer Name:	
Steering Committee Reviewer Name:	
1. IMPORTANCE TO MEASURE AND REPORT	
Extent to which the specific measure focus is important to making significant gains in health care quality (safety, timeliness, effectiveness, efficiency, equity, patient-centeredness) and improving health outcomes for a specific high impact aspect of healthcare where there is variation in or overall poor performance. *Measures must be judged to be important to measure and report in order to be evaluated against the remaining criteria.* (composite measure evaluation criteria)	**Eval**
(for NQF staff use) **Specific NPP goal**:	
1d. Purpose/objective of the Composite **1d.1 Describe the purpose/objective of the composite measure:** The National Quality Forum recently endorsed performance measures 0642 and 0643, which assess referral to cardiac rehabilitation/secondary prevention programs (CR) from inpatient and outpatient settings. These measures were developed to correct disparities in underutilization of CR, because CR has been shown to decrease morbidity and mortality following acute cardiac events, as well as improve functional capacity, cardiovascular risk factors, adherence with preventive medications, and psychosocial well-being. Moreover, CR programs promote care coordination, by facilitating communication about secondary prevention issues between patients and their healthcare providers. This composite measure is one of four measures which were developed to assure quality standards for the delivery of CR. The other three paired measures that are being submitted under this endorsement process are related to setting safety standards for CR, assessing patients' risk for adverse cardiovascular risk, and monitoring response to therapy and documenting program effectiveness. The purpose of this composite measure is to assure individualized assessment and evaluation of modifiable cardiovascular risk factors, development of individualized interventions, and communication with other health care providers. **1d.2 Describe the quality construct used in developing the composite:** This performance measure includes 10 individual sub-measures for the evaluation of modifiable cardiovascular risk factors, the development of individualized treatment plans for those factors, and communication to coordinate these treatments with other health care providers concerning these risk factors and interventions. The rationale for including both recognition and intervention for satisfactory fulfillment of these measures is predicated upon the belief that high-quality cardiovascular care requires both the identification and treatment of known cardiovascular risk factors. An important component of this performance measure is the expectation that the CR staff communicates with appropriate primary care providers and treating physicians in order to help coordinate risk factor management and to promote life-long adherence to lifestyle and pharmacological therapies.	**1d** C☐ P☐ M☐ N☐
1e. Components and conceptual construct for quality **1e.1 Describe how the component measures/items are consistent with and representative of the quality construct:** Each of the individual sub-measures is structured to include assessment of modifiable cardiovasular risk, development of an individual treatment plan to address that risk, reassessment of the modifiable risk factor prior to completion of the CR program, and communication with other health care providers about patient status related to that risk factor. The sub-measures include the following modifiable cardiovascular risk factors: tobacco use, blood pressure control, optimal lipid control, physical activity habits, weight management, diagnosis of diabetes mellitus or impaired fasting glucose, and presence or absence of depression. Individualized assessment of exercise capacity and individualized adherence to preventive medications measures are included to assure that appropriate exercise programing and educational/counseling sessions are provided. The final measure requires that a policy be in place to ensure communication with health care providers about individual patient status related to each modifiable risk factor at entrance to and completion of the CR program, as well as when thresholds are met for more frequent or urgent communication concerning suboptimal risk	**1e** C☐ P☐ M☐ N☐

Comment [KP2]: 1d. The purpose/objective of the composite measure and the construct for quality are clearly described.

Comment [KP3]: 1e. The component items/measures (e.g., types, focus) that are included in the composite are consistent with and representative of the conceptual construct for quality represented by the composite measure. Whether the composite measure development begins with a conceptual construct or a set of measures, the measures included must be conceptually coherent and consistent with the purpose.

factor control. The goal of this composite measure is to assure that each patient is assessed, is provided with individualized risk factor modification education/counseling, and that there is appropriate communication with other health care providers to facilitate continued progress toward meeting secondary prevention outcome goals. Formatted individualized treatment plans can be used to prompt CR staff to address all of the sub-measures, including re-assessment and communication when appropriate.

If the component measures are combined at the patient level, complete 1a, 1b, and 1c.

If the component measures are combined at the aggregate level, skip to criterion 2, *Scientific Acceptability of Measure Properties* (individual measures are either NQF-endorsed or submitted individually).

1a. High Impact

1a.1 Demonstrated high impact aspect of healthcare (*Select the most relevant*)

☒ affects large numbers ☒ frequently performed procedure ☒ leading cause of morbidity/mortality
☐ high resource use ☐ severity of illness ☒ patient/societal consequences of poor quality
☐ other, describe: **1a.2**

1a.3 Summary of Evidence of High Impact:

Cardiac rehabilitation/secondary prevention programs (CR) have been shown to reduce morbidity and mortality, coronary risk factor profiles, functional status, and quality of life in patients who have had recent cardiovascular events (1). The core components of CR are designed to optimize cardiovascular risk reduction, foster healthy behaviors and compliance with those behaviors, reduce cardiovascular disability, and promote an active lifestyle for patients with cardiovascular disease. (2) During CR, patients work with staff to develop an individualized treatment plan to address modifiable risk factors. Staff track progress toward goals, communicate with other healthcare providers about that progress, and promote lifelong adherence with healthy behaviors, including compliance with preventive medications. Evidence for each of the elements of this measure are summarized below:

A. Cessation of tobacco use is most successful when healthcare providers work together with patients to identify and implement effective treatment strategies. Persons with CVD who stop smoking reduce their cardiovascular risk by approximately 35%. (2,3,4)

B. Blood pressure levels represent a strong, consistent, continuous, independent, and etiologically relevant risk factor for cardiovascular and renal disease. Optimal control of blood pressure has a beneficial impact on lowering cardiovascular risk. (2,4)

C. Multiple clinical trials have shown the benefit of lipid-lowering agents and lifestyle modification for patients with documented cardiovascular disease. (4)

D. Adherence to regular physical activity has been associated with a 20-30% reduction in all-cause mortality in CVD patients. (5)

E. Obesity is an independent risk factor for CVD and adversely affects CVD risk factors. By adhering to diet and lifestyle recommendations, patients can substantially reduce their risk of cardiovascular disease. (4,6)

F. The presence of diabetes mellitus (DM) or impaired fasting glucose (IFG) has been linked to unfavorable long-term cardiovascular outcomes. The CR program setting is an ideal environment to educate patients about the implications of DM or IFG and to initiate the behavior patterns which foster improved glycemic control. (4,7)

G. Depression is highly prevalent among patients following acute cardiac events, with 20-45% of patients suffering significant levels of depressive symptoms after an acute myocardial infarction. (8,9) Depression has been shown to be a powerful, independent risk factor for cardiac mortality after an acute myocardial infarction or unstable angina. (10,11) Several studies suggest that depressed patients with CVD benefit from CR programs by improving coping skills and self image, reducing biological risk factors such as social isolation and smoking, by providing emotional support, and improving quality of life scores. (12)

H. Meta-analyses and observational studies have concluded that comprehensive, exercise-based CR reduces mortality rates in patients with CVD. (5,13,14,15,16)

I. The use of preventive medications that may or may not be tied to a specific risk factor (aspirin, omega-3 fatty acids, beta blockers, and ACE inhibitors/ARB agents, for instance) are also critically important in reducing recurrent cardiovascular events in patients enrolled in a CR program. (4) A gap in their usage is common, but can be corrected with the help of systematic programs, such as CR programs, that can promote the appropriate use of preventive medications and thereby improve patient outcomes. (17)

J. Optimal communication between the CR team and appropriate health care providers will promote timely adjustments in a patient's medical regimen, leading to improved risk factor modification.

1a
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Comment [KP4]: 1a. The measure focus addresses:
- a specific national health goal/priority identified by NQF's National Priorities Partners; OR
- a demonstrated high impact aspect of healthcare (e.g., affects large numbers, leading cause of morbidity/mortality, high resource use (current and/or future), severity of illness, and patient/societal consequences of poor quality).

1a.4 Citations for Evidence of High Impact: 1) Wenger NK. Current status of cardiac rehabilitation. J Am Coll Cardiol 2008;51:1619-31(2) Balady G WM, Ades PA, Bittner V, Comoss P, Foody J, Franklin B, Sanderson B, Southard D. Core components of cardiac rehabilitation/secondary prevention programs: 2007 update. J Cardiopulm Rehabil 2007;27:121-129(3) Lestra JA, Kromhout D, van der Schouw YT, Grobbee DE, Boshuizen HC, van Staveren WA. Effect size estimates of lifestyle and dietary changes on all-cause mortality in coronary artery disease patients: a systematic review. Circulation. 2005;112:924-34.(4) Smith SC, Jr., Allen J, Blair SN, Bonow RO, Brass LM, Fonarow GC, Grundy SM, Hiratzka L, Jones D, Krumholz HM, Mosca L, Pearson T, Pfeffer MA, Taubert KA. AHA/ACC guidelines for secondary prevention for patients with coronary and other atherosclerotic vascular disease: 2006 update endorsed by the National Heart, Lung, and Blood Institute. J Am Coll Cardiol. 2006;47:2130-9.(5) Taylor RS, Brown A, Ebrahim S, Jolliffe J, Noorani H, Rees K, Skidmore B, Stone JA, Thompson DR, Oldridge N. Exercise-based rehabilitation for patients with coronary heart disease: systematic review and meta-analysis of randomized controlled trials. Am J Med. 2004;116:682-92.(6) Lichtenstein AH, Appel LJ, Brands M, Carnethon M, Daniels S, Franch HA, Franklin B, Kris-Etherton P, Harris WS, Howard B, Karanja N, Lefevre M, Rudel L, Sacks F, Van Horn L, Winston M, Wylie-Rosett J. Diet and lifestyle recommendations revision 2006: a scientific statement from the American Heart Association Nutrition Committee. Circulation. 2006;114:82-96.(7) Standards of medical care in diabetes--2009. Diabetes Care. 2009;32:S3-61.(8) Schleifer SJ, Macari-Hinson MM, Coyle DA, Slater WR, Kahn M, Gorlin R, Zucker HD. The nature and course of depression following myocardial infarction. Arch Intern Med. 1989;149:1785-9.(9) Lane D, Carroll D, Ring C, Beevers DG, Lip GY. The prevalence and persistence of depression and anxiety following myocardial infarction. Br J Health Psychol. 2002;7:11-21.(10) Frasure-Smith N, Lesperance F, Talajic M. Depression following myocardial infarction. Impact on 6-month survival. JAMA. 1993;270:1819-25.(11) Lesperance F, Frasure-Smith N, Juneau M, Theroux P. Depression and 1-year prognosis in unstable angina. Arch Intern Med. 2000;160:1354-60.(12) Zellweger MJ, Osterwalder RH, Langewitz W, Pfisterer ME. Coronary artery disease and depression. Eur Heart J. 2004;25:3-9. (13) Jolliffe JA, Rees K, Taylor RS, Thompson D, Oldridge N, Ebrahim S. Exercise-based rehabilitation for coronary heart disease. Cochrane Database Syst Rev. 2001:CD001800.(14) McAlister FA, Lawson FM, Teo KK, Armstrong PW. Randomised trials of secondary prevention programmes in coronary heart disease: systematic review. BMJ. 2001;323:957-62.(15) Clark AM, Hartling L, Vandermeer B, McAlister FA. Meta-analysis: secondary prevention programs for patients with coronary artery disease. Ann Intern Med. 2005;143:659-72.(16) Agency for Healthcare Research Technology Assessment Program. Randomized trials of secondary prevention programs in coronary artery disease: a systematic review. Agency for Healthcare Research and Quality. 2005. (17) Cortes O, Arthur HM. Determinants of referral to cardiac rehabilitation programs in patients with coronary artery disease: a systematic review. Am Heart J. 2006;151:249-56.

1b. Opportunity for Improvement

1b.1 Briefly explain benefits (improvements in quality) envisioned by use of this measure:
Studies suggest that the identification, treatment, and control of cardiovascular risk factors are sub-optimal, even among persons with known cardiovascular disease. This measure was designed to encourage CR programs to develop a systematic approach to the optimal and individualized evaluation and treatment of modifiable cardiovascular risk factors as well as the coordination of such activities with a patient's other healthcare providers in order to optimize treatment of these risk factors, help patients develop life-long healthy lifestyle behaviors, and facilitate communication between patients and their health care providers about these risk factors.

1b.2 Summary of data demonstrating performance gap (*variation or overall poor performance across providers*)**:**
The American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR) provides a Program Certification/Recertification process to promote quality improvement in CR, which requires that the applicants demontrate compliance with this measure. As part of the certification process, CR programs are required to demonstrate that they use an individualized treatment plan (ITP) format to assess, track, and communicate about modifiable cardiovascular risk factors and to provide evidence of communication with health care providers about modifiable risk factors. (1) Only approximately less than 40% of programs in the United States are currently certified. Recent data from the AACVPR Program Certification/Recertification process confirms variablity in performance across providers, even among those CR professionals who are motivated to apply for voluntary certification for performance improvement reasons. From a total of 607 applications received in 2007-09, 467 required remediation efforts and resubmission prior to approval, 39 were not approved and were placed into a provisional category, and 12 were denied certification or recertification. (2)
Additional data demonstrates vatiation among CR programs related to assessment and and treatment of

1b
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N ☐

Comment [KP5]: 1b. Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating considerable variation, or overall poor performance, in the quality of care across providers and/or population groups (disparities in care).

modifiable risk factors. For example, in 2002, the New York State Association of Cardiovascular and Pulmonary Rehabilitation and Island Peer Review Organization reported a collaborative project to evaluate whether patients participating in cardiac rehabilitation were assessed with valid and reliable depression screening tools. 840 charts from 40 centers were reviewed and only 15% (126/840) of patients received a valid screening for depression. The proportion of patients with a positive valid screening for depression that received appropriate referral or treatment was 15% (29/193).(3) The second phase of this project included distribution of a depression screening tool kit that included validated screening tools, scoring thresholds and patient/staff educational materials. (4) This information was also presented at AACVPR Annual Meetings.

A recent AACVPR survey of CR Program Directors (n=309, 9/08) showed that assessment of the presence/absence of depression, using a valid and reliable screening tool improved to 80% of respondents. However, there are still deficits related to communication with other health care providers. Only 51% of programs have a written policy about communication and only 77% notify a physician about abnormal screening results. (5)

Evaluation of outcomes data from the Wisconsin Cardiac Rehabilitation Outcomes Registry (WiCORE) also confirms variation in quality of cardiac rehabilitation programming and opportunities for improvement. Unpublished data from WiCORE demonstrates that there is wide variation in the reporting of clinical variables, even in programs certified by AACVPR. For example, of programs entering at least 100 records in the registry, the percentage of discharge records with documented LDL values ranges from 6-90%. Program size appears to be independent of the completeness of documentation, as large programs (greater than 200 referrals per year) are as likely to have incomplete records as small programs (less than 100 referrals per year). Completeness of documentation of lipids at program discharge also appears to be independent of program duration or frequency of CR visits. However, there do appear to be disparities related to a patient's race. Non-whites have fewer lipid values recorded both at entry and discharge from CR, compared with white patients. At entry, 78% of white patients had lipid values recorded, compared to 60% for Hispanic/Latinos and 61% for Afro-Americans. At discharge, the rate of recording lipid values fell to 53%, 34% and 28%, repectively. This clearly illustrates variation among CR programs with respect to assessing and reassessing modifiable risk factor such as optimal lipid control. Moreover, WiCORE data from 2008-2010 reveals similar variation with regards to reporting blood pressure, weight, and exercise days per week. (6) Finally, Zullo et al recently described significant variation among CR programs in Ohio related to core component assessements and provision of education/counseling. For example, although 100% measured blood pressure at start of CR and 88% assessed lipids, only 70% measured pre-exercise glucose and 36% screened for depression. Ninety-nine percent offered group education about nutrition, 82% instructed on weight control and only 61% set weight loss goals. This data demonstrates that there remains significant room for performance improvement among CR programs with respect to assessment of modifiable risk factors, as well as development of individual treatment plans. (7)

1b.3 Citations for data on performance gap:
1) http://www.aacvpr.org/Portals/0/CardioCert_ScreenShots.pdf (2) Personal communication from Abagail Lynn, AACVPR staff(3) Stimler C, Lichtman S, Crespy S. An investigation of depression screening and treatment in the cardiac rehabilitation setting. J Cardiopul Rehabil 2002. 22:360.(4) http://projects.ipro.org/index/ami_depression(5) Personal communication from Bonnie Sanderson, AACVPR Board(6) Personal communication from Mark Vitcenda, WiCORE coordinator, http://wiscphr.wisc.edu/Content.aspx?cmspageid=474(5) http://projects.ipro.org/index/ami_depression (7) Zullo M, Dolansky MA, Jackson LW Incorporation of core component guidelines into cardiac rehabilitation practice. J Cardiopul Rehabil and Prev 2010;30:265-278.

1b.4 Summary of Data on disparities by population group:
Among patients engaging in cardiac rehabilitation/secondary prevention programs, there is limited evidence for disparity in care or outcomes for patients enrolled in CR that are related to this measure focus. Disparities related to race noted in the WiCORE registry are noted in 1b.2. During a national AACVPR survey of CR Program Directors (n=173), who treat patients in a variety of settings ranging from rural to suburban to urban, 96.0% included risk factor assessment and coordinated treatment plan in their operations policies and procedures.

1b.5 Citations for data on Disparities: none

1c. Evidence-based **1c**

Rating: C=Completely; P=Partially; M=Minimally; N=Not at all; NA=Not applicable

Comment [KP6]: 1c. The measure focus is:
•an outcome (e.g., morbidity, mortality, function, health-related quality of life) that is relevant to, or associated with, a national health goal/priority, the condition, population, and/or care being addressed;
OR
•if an intermediate outcome, process, structure, etc., there is **evidence** that supports the specific measure focus as follows:
oIntermediate outcome – evidence that the measured intermediate outcome (e.g., blood pressure, Hba1c) leads to improved health/avoidance of harm or cost/benefit.
oProcess – evidence that the measured clinical or administrative process leads to improved health/avoidance of harm and
if the measure focus is on one step in a multi-step care process, it measures the step that has the greatest effect on improving the specified desired outcome(s).
oStructure – evidence that the measured structure supports the consistent delivery of effective processes or access that lead to improved health/avoidance of harm or cost/benefit.
oPatient experience – evidence that an association exists between the measure of patient experience of health care and the outcomes, values and preferences of individuals/ the public.
oAccess – evidence that an association exists between access to a health service and the outcomes of, or experience with, care.
Efficiency – demonstration of an association between the measured resource use and level of performance with respect to one or more of the other five IOM aims of quality.

1c.1 Relationship to Outcomes (*For non-outcome measures, briefly describe the relationship to desired outcome. For outcomes, describe why it is relevant to the target population.)*
The performance measures that are included are designed to help health care groups identify potentially correctable and actionable "upstream" sources of suboptimal clinical care. This measure quantifies specific aspects of care and is designed to capture all relevant dimensions of CR care. Cardiac rehabilitation/secondary prevention (CR) services reduce morbidity and mortality in patients with cardiovascular disease. These patients are at relatively high risk for recurrent cardiovascular events, which is why it is important to identify and treat modifiable cardiovascular risk factors. The desired outcome is improvement in cardiovascular risk factor outcomes, such as avoidance of tobacco use and improved blood pressure, lipid and glycemic control. In addition, it is anticipated that an individualized treatment plan (ITP) will provide a structured approach to encouraging adherence with preventive medications, identification of depression and promotion of healthy behaviors such as regular exercise. Information from the ITP is used to generate reports to other healthcare providers and CR professionals that facilitate communication between patients and their healthcare providers about modifiable risk factors and preventive medications. The processes required by these measures are designed to promote optimal cardiovascular risk factor modification.

1c.2 Type of Evidence *(Check all that apply)*
☐ Cohort study ☒ Evidence-based guideline ☒ Expert opinion ☐ Meta-analysis
☐ Observational study ☒ Randomized controlled trial ☐ Systematic synthesis of research
☐ Other (*Please describe*): **1c.3**

1c.4 Summary of Evidence *as described above for type of measure; for outcomes, summarize any evidence that healthcare services/care processes influence the outcome*)**:**
A. Assessment of Tobacco Use
AHA/AACVPR Scientific Statement: Core Components of Cardiac Rehabilitation/Secondary Prevention Programs 2007 Update (1) (No class of recommendation or level of evidence given) Goals: Short -term: Patient will demonstrate readiness to change by initially expressing decision to quit and selecting a quit date. Subsequently, patient will quit smoking and all tobacco use, and adhere to pharmacological therapy (if prescribed) and practice relapse prevention strategies; patient will resume cessation plan as quickly as possible when temporary relapse occurs. Long-term: Complete abstinence from smoking and use of all tobacco products for at least 12 months (maintenance) from quit data. AHA Scientific Statement: Diet and Lifestyle Recommendations Revision 2006 (2) (No class of recommendation or level of evidence given) Goal: Avoid use of (and exposure to) tobacco products.

B. Assessment of Blood Pressure Control
AHA/AACVPR Scientific Statement: Core Components of Cardiac Rehabilitation/Secondary Prevention Programs 2007 Update (1) (No class of Recommendation or Level of Evidence given) Goal: Continued assessment and modification of intervention until normalization of BP. AHA Scientific Statement: Diet and Lifestyle Recommendations Revision 2006 (2) (No class of Recommendation or Level of Evidence given) Goal: Aim for a normal blood pressure.
Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. National High Blood Pressure Education Program (3) (No class of Recommendation or Level of Evidence given) Treating systolic BP and diastolic BP to targets that are less than 140/90 mm Hg is associated with a decrease in CVD complications. In patients with hypertension with diabetes or renal disease, the BP goal is less than 130/80 mm Hg.

C. Assessment of Optimal Lipid Control
AHA/AACVPR Scientific Statement: Core Components of Cardiac Rehabilitation/Secondary Prevention Programs: 2007 Update (1) (No Class of Recommendation or Level of Evidence given) Goals: Short-term: Continued assessment and modification of intervention until LDL<100mg/dL (further reduction to a goal <70 mg/dL is considered reasonable). Long-term: LDL<100mg/dL (further reduction to a goal<70 mg/dL is considered reasonable). Secondary goal: non-HDL cholesterol <130 mg/dL (further reduction to a goal of <100mg/dL is considered reasonable).
AHA Scientific Statement: Diet and Lifestyle Recommendations Revision 2006 (2) (No Class of Recommendation or Level of Evidence Given) Goal: Aim for recommended levels of low-density lipoprotein (LDL) cholesterol, high-density lipoprotein (HDL) cholesterol, and triglycerides.

H☐ **M**☐ **L**☐ **N**☐

D. Assessment of Physical Activity Habits
AHA/AACVPR Scientific Statement: Core Components of Cardiac Rehabilitation/Secondary Prevention Programs: 2007 Update (1) (No Class of Recommendation or Level of Evidence given) Goal: 30-60 minutes per day of moderate-intensity physical activity on 5 or more (preferably most) days of the week.
Exercise and Physical Activity in the Prevention and Treatment of Atherosclerotic Cardiovascular Disease: A Statement From the Council on Clinical Cardiology (Subcommittee on Exercise, Rehabilitation, and Prevention) and the Council on Nutrition, Physical Activity, and Metabolism (Subcommittee on Physical Activity) (4)(No Class of Recommendation or Level of Evidence given) Health professionals should prescribe physical activity programs commensurate with those recommended by the CDC and the ACSM, i.e., 30 minutes or more of moderate-intensity physical activity such as brisk walking on most, and preferably all, days of the week.

E. Assessment of Weight Management
AHA/AACVPR Scientific Statement: Core Components of Cardiac Rehabilitation/Secondary Prevention Programs: 2007 Update (1) (No Class of Recommendation or Level of Evidence given) Goals: Short-term: Continued assessment and modification of interventions until progressive weight loss is achieved. Provide referral to specialized, validated nutrition weight loss programs if weight goals are not achieved. Long-term: Adherence to diet and physical activity/exercise program aimed toward attainment of established weight goal.
AHA Scientific Statement: Diet and Lifestyle Recommendations Revision 2006 (2)(No Class of Recommendation or Level of Evidence given) Goal: Aim for a healthy body weight.(No Class of Recommendation or Level of Evidence given) Goals: Balance caloric intake and physical activity to achieve and maintain a healthy body weight; consume a diet rich in vegetables and fruits; choose whole-grain, high-fiber foods; consume fish, especially oily fish, at least twice a week; limit intake of saturated fat to <7% of energy, trans fat to <1% of energy, and cholesterol to <300mg/day by choosing lean meats and vegetable alternatives, fat-free (skim) or low-fat (1% fat) dairy products and minimize intake of partially hydrogenated fats; minimize intake of beverages and foods with added sugars; choose and prepare foods with little or no salt; if you consume alcohol, do so in moderation; and when you eat food prepared outside of the home, follow these Diet and Lifestyle Recommendations.

F. Assessment of the Diagnosis of Diabetes Mellitus or Impaired Fasting Glucose
Physical Activity/Exercise and Type 2 Diabetes: A Consensus Statement from the American Diabetes Association (5)(No Class of Recommendation given) Those who take insulin or secretagogues should check capillary blood glucose before, after, and several hours after completing a session of physical activity, at least until they know their usual glycemic responses to such activity. (Level of Evidence E, from the American Diabetes Association classification system, in which Level of Evidence E is based on expert consensus or clinical experience)
American Diabetes Association Standards of Medical Care in Diabetes-200 (6)(No Class of Recommendation given) Patients with impaired glucose tolerance (Level of Evidence A, from the ADA classification system, in which Level A is based on clear evidence from well-conducted, generalizable, randomized controlled trials that are adequately powered) or Impaired fasting glucose (Level of Evidence E, expert consensus or clinical experience) should be referred to an effective ongoing support program for weight loss of 5-10% of body weight and increasing physical activity to at least 150 min per week of moderate activity such as walking. Follow-up counseling appears to be important for success. (Level of Evidence B, supportive evidence from well conducted cohort studies). Individuals who have pre-diabetes or diabetes should receive individualized medical nutrition therapy (MNT) as needed to achieve treatment goals, preferably provided by a registered dietitian familiar with the components of diabetes MNT. (Level of Evidence B, from the ADA classification system, as above.) Self-management behavior change is the key outcome of diabetes self-management education and should be measured and monitored as part of care. (Level of Evidence E, see above)
AHA/AACVPR Scientific Statement: Core Components of Cardiac Rehabilitation/Secondary Prevention Programs: 2007 Update (1) (No Class of Recommendation or Level of Evidence given) Educate patient and staff to be alert for signs/symptoms of hypoglycemia or hyperglycemia and provide appropriate assessment and interventions. Teach and practice self-monitoring skills for use during unsupervised exercise. Refer to registered dietitian for medical nutrition therapy. Consider referral to certified diabetic education for skill training, medication instruction, and support groups.

G. Assessment of the Presence or Absence of Depression
Depression Screening in Cardiac Rehabilitation: AACVPR Task Force Report (7)(No Class of Recommendation or Level of Evidence given)The AACVPR recommends that appropriately trained healthcare professionals in

the CR setting assess for depression using a valid and reliable screening tool and ask specific questions about depression as a part of the intake assessment and/or clinical interview. We also recommend that cardiac rehabilitation professionals communicate findings indicating possible clinical depression to referring physicians, facilitate referral of patients for appropriate treatment, and periodically reassess therapeutic progress.

H. Assessment of Exercise Capacity
ACC/AHA 2002 Guidelines Update for Exercise Testing: Summary Article Class I (8) Assessment of symptom limited exercise tolerance for activity prescription.
AHA/AACVPR Scientific Statement: Core Components of Cardiac Rehabilitation/Secondary Prevention Programs: 2007 Update (1) (No Class of Recommendation or Level of Evidence given) Develop a documented individualized exercise prescription for aerobic and resistance training that is based on evaluation findings, risk stratification, patient and program goals, and resources. Exercise prescription should specify frequency, intensity, duration, and modalities.
Working Group on Cardiac Rehabilitation and Exercise Physiology of the European Society of Cardiology Position Paper (9)(No Class of Recommendation or Level of Evidence given)Moderate-to-high risk cardiac patients must undergo an individualized exercise program and receive an exercise prescription within the limits imposed by their disease.

I. Assessment of Adherence to Preventive Medications
AHA/ACC Guidelines for Secondary Prevention for Patients With Coronary and Other Atherosclerotic Vascular Disease: 2006 Update (10)Class I (B)Use of antiplatelet agents, renin-angiotensin-aldosterone system blocker, and beta blockers

J. Communication with Health Care Providers
AHA/AACVPR Scientific Statement: Core Components of Cardiac Rehabilitation/Secondary Prevention Programs: 2007 Update (1) (No Class of Recommendation or Level of Evidence given) It is essential to the success of any program that each of these interventions is performed in concert with the patient's primary care provider and/or cardiologist, who will subsequently supervise and refine these interventions over the long term.
Medical Director Responsibilities for Outpatient Cardiac Rehabilitation/secondary Prevention Programs (No class of recommendation or level of evidence given) (11) By working closely with referring physicians, the cardiac rehabilitation team can assist the patient in reaching target goals more effectively.

1c.5 Rating of strength/quality of evidence (*also provide narrative description of the rating and by whom*)
A - Assessment of Tobacco Use: Class I (Level of Evidence B)
B - Assessment of Blood Pressure Control: Class I (Level of Evidence: B, for lifestyle modification; A, for pharmacological treatment)
C - Assessment of Optimal Lipid Control: Class I (Level of Evidence: B, for lifestyle modification; A, for pharmacological treatment)
D - Assessment of Physical Activity Habits: Class I (Level of Evidence B)
E - Assessment of Weight Management: Class I (Level of Evidence B)
F - Assessment of the Diagnosis of Diabetes Mellitus or Impaired Fasting Glucose: Class I (Level of Evidence B, for lifestyle, pharmacotherapy and modification of other risk factors; C, for coordination of care.)
G - Assessment of the Presence or Absence of Depression: Not listed in this guideline, but see evidence listed for 1c.10.
H - Assessment of Exercise Capacity: Not listed in this guideline, but see evidence listed for 1c.10.
I - Assessment of Adherence to Preventive Medications: Class I (Level of Evidence B)
J - Communication with Health Care Providers: Not listed in this guideline, but see evidence listed above.

1c.6 Method for rating evidence: Definitions for Classification of Recommendations and Level of Evidence: Class 1 - Intervention is useful and effective; Level A - Multiple populations evaluated, data derived from multiple randomized clinical trials or meta-analyses; Level B - Limited populations evaluated, data derived from a single randomized trial or nonrandomized studies; Level C - Very limited populations evaluated, only consensus opinion of experts, case studies, or standard of care

1c.7 Summary of Controversy/Contradictory Evidence: There is some controversy about the role and efficacy of disease management systems to modify cardiovascular risk factors and to improve adherence to

preventive medication. However, a recent evaluation of care coordination programs found that the most effective systems involved nurse with patient education that facilitated communication with treating physicians. (12) CR programs often provide this form of care coordination, especially related to assessing patients for symptoms, promoting communication with other health care providers, and educating patients about proper use of preventive medications. Often, there are misunderstandings and miscommunication about medications when patients are discharged from acute care to home and CR professionals help correct these issues to improve adherence to preventive medication and lifestyle modification, which improve long term patient outcomes. (13)

1c.8 Citations for Evidence (*other than guidelines*) 1) Balady G WM, Ades PA, Bittner V, Comoss P, Foody J, Franklin B, Sanderson B, Southard D. Core components of cardiac rehabilitation/secondary prevention programs: 2007 update. J Cardiopulm Rehabil 2007;27:121-129(2) Lichtenstein AH, Appel LJ, Brands M, Carnethon M, Daniels S, Franch HA, Franklin B, Kris-Etherton P, Harris WS, Howard B, Karanja N, Lefevre M, Rudel L, Sacks F, Van Horn L, Winston M, Wylie-Rosett J. Diet and lifestyle recommendations revision 2006: a scientific statement from the American Heart Association Nutrition Committee. Circulation. 2006;114:82-96(3) Chobanian AV, Bakris GL, Black HR, Cushman WC, Green LA, Izzo JL, Jr., Jones DW, Materson BJ, Oparil S, Wright JT, Jr., Roccella EJ. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure: the JNC 7 report. JAMA. 2003;289:2560-72.(4) Thompson PD, Buchner D, Pina IL, Balady GJ, Williams MA, Marcus BH, Berra K, Blair SN, Costa F, Franklin B, Fletcher GF, Gordon NF, Pate RR, Rodriguez BL, Yancey AK, Wenger NK. Exercise and physical activity in the prevention and treatment of atherosclerotic cardiovascular disease: a statement from the Council on Clinical Cardiology (Subcommittee on Exercise, Rehabilitation, and Prevention) and the Council on Nutrition, Physical Activity, and Metabolism (Subcommittee on Physical Activity). Circulation. 2003;107:3109-16.(5) Sigal RJ, Kenny GP, Wasserman DH, Castaneda-Sceppa C, White RD. Physical activity/exercise and type 2 diabetes: a consensus statement from the American Diabetes Association. Diabetes Care. 2006;29:1433-8.(6) Standards of medical care in diabetes--2009. Diabetes Care. 2009;32;S6-61.(7) Herridge ML, Stimler CE, Southard DR, King ML. Depression screening in cardiac rehabilitation: AACVPR Task Force Report. J Cardiopulm Rehabil. 2005;25:11-3.(8) Gibbons RJ, Balady GJ, Bricker JT, Chaitman BR, Fletcher GF, Froelicher VF, Mark DB, McCallister BD, Mooss AN, O'Reilly MG, Winters WL, Antman EM, Alpert JS, Faxon DP, Fuster V, Gregoratos G, Hiratzka LF, Jacobs AK, Russell RO, Smith SC. ACC/AHA 2002 guideline update for exercise testing: summary article. A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Update the 1997 Exercise Testing Guidelines). J Am Coll Cardiol. 2002;40:1531-40.(9) Giannuzzi P, Mezzani A, Saner H, Bjornstad H, Fioretti P, Mendes M, Cohen-Solal A, Dugmore L, Hambrecht R, Hellemans I, McGee H, Perk J, Vanhees L, Veress G. Physical activity for primary and secondary prevention. Position paper of the Working Group on Cardiac Rehabilitation and Exercise Physiology of the European Society of Cardiology. Eur J Cardiovasc Prev Rehabil. 2003;10:319-27.(10) Smith SC, Jr., Feldman TE, Hirshfeld JW, Jr., Jacobs AK, Kern MJ, King SB, 3rd, Morrison DA, O'Neill W W, Schaff HV, Whitlow PL, Williams DO, Antman EM, Adams CD, Anderson JL, Faxon DP, Fuster V, Halperin JL, Hiratzka LF, Hunt SA, Nishimura R, Ornato JP, Page RL, Riegel B. ACC/AHA/SCAI 2005 Guideline Update for Percutaneous Coronary Intervention-Summary Article: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (ACC/AHA/SCAI Writing Committee to Update the 2001 Guidelines for Percutaneous Coronary Intervention). J Am Coll Cardiol. 2006;47:216-35.(11) King ML, Williams MA, Fletcher GF, Gordon NF, Gulanick M, King CN, Leon AS, Levine BD, Costa F, Wenger NK. 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. Circulation. 2005;112:3354-60. (12) Peikes D, Chen A, Schore J, Brown R. Effects of care coordination on hospitalization, quality of care, & health care expenditures among Medicare beneficiaries. JAMA, Feb 11, 2009, Vol. 301, No 6, 603-618(13) Shah ND, et al. Long-term medication adherence after myocardial infarction: experience of a community. Am J. Medicine 2009 in press

1c.9 Quote the Specific guideline recommendation (*including guideline number and/or page number*)
A - Assessment of Tobacco Use. Goal: Complete cessation.
B - Assessment of Blood Pressure Control. Goal: <140/90 mmHg or <130/80 mmHg if patient has diabetes or chronic kidney disease.
C - Optimal Lipid Control. Goal: LDL-C<100mg/dl; If triglycerides are >200 mg/dl, non-HDL-C should be <130 mg/dl.
D - Assessment of Physical Activity Habits. Goal: 30 minutes, 7 days per week (minimum 5 days per week).
E - Assessment of Weight Management. Goal: Body mass index: 18.5 to 24.9 kg/m2; Waist circumference:

men < 40 inches, women <35 inches. F - Assessment of the Diagnosis of Diabetes Mellitus or Impaired Fasting Glucose. Goal: Initiate lifestyle and pharmacotherapy to achieve near-normal HbA1C. Begin vigorous modification of other risk factors. Coordinate diabetic care with patient's primary care physician or endocrinologist. G - Assessment of the Presence or Absence of Depression. Not included in this guideline, but see evidence listed above in #20. H. Assessment of Exercise Capacity. Not listed in this guideline, but see evidence listed above. I. Assessment of Adherence to Preventive Medications. Goal: Use of Antiplatelet Agents, Renin-Angiotensin-Aldosterone System Blockers, and Beta-Blockers. J. Communication with Health Care Providers. Not listed in this guideline, but see evidence listed above. 1c.10 **Clinical Practice Guideline Citation:** Smith SC, Jr., Allen J, Blair SN, Bonow RO, Brass LM, Fonarow GC, Grundy SM, Hiratzka L, Jones D, Krumholz HM, Mosca L, Pearson T, Pfeffer MA, Taubert KA. AHA/ACC guidelines for secondary prevention for patients with coronary and other atherosclerotic vascular disease: 2006 update endorsed by the National Heart, Lung, and Blood Institute. J Am Coll Cardiol. 2006;47:2130-9. . 1c.11 **National Guideline Clearinghouse or other URL:** Http://content.onlinejacc.org/cgi/content/full/47/10/2130 1c.12 **Rating of strength of recommendation** (*also provide narrative description of the rating and by whom*) A - Assessment of Tobacco Use: Class I (Level of Evidence B) B - Assessment of Blood Pressure Control: Class I (Level of Evidence: B, for lifestyle modification; A, for pharmacological treatment) C - Assessment of Optimal Lipid Control: Class I (Level of Evidence: B, for lifestyle modification; A, for pharmacological treatment) D - Assessment of Physical Activity Habits: Class I (Level of Evidence B) E - Assessment of Weight Management: Class I (Level of Evidence B) F - Assessment of the Diagnosis of Diabetes Mellitus or Impaired Fasting Glucose: Class I (Level of Evidence B for lifestyle, pharmacotherapy and modification of other risk factors; C for coordination of care.) G - Assessment of the Presence or Absence of Depression: Not listed in this guideline, but see evidence listed in 1c.10. H - Assessment of Exercise Capacity: Not listed in this guideline, but see evidence listed in 1c.10. I - Assessment of Adherence to Preventive Medications: Class I (Level of Evidence B) J - Communication with Health Care Providers: Not listed in this guideline, but see evidence listed in 1c.10. 1c.13 **Method for rating strength of recommendation** (*If different from USPSTF system, also describe rating and how it relates to USPSTF)*: Definitions for Classification of Recommendations and Level of Evidence: Class 1 - Intervention is useful and effective; Level A - Multiple populations evaluated, data derived from multiple randomized clinical trials or meta-analyses; Level B - Limited populations evaluated, data derived from a single randomized trial or nonrandomized studies; Level C - Very limited populations evaluated, only consensus opinion of experts, case studies, or standard of care 1c.14 **Rationale for using this guideline over others:** This guideline was the major source document for development of this performance measure because it provides guidance about target goals for the majority of the modifiable cardiovascular risk factors. The core components of cardiac rehabilitation are based on this guideline.	
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Importance to Measure and Report?*	**1**
Steering Committee: Was the threshold criterion, *Importance to Measure and Report*, **met?** **Rationale:**	**1** **Y☐** **N☐**
2. SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES	
Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. (composite measure evaluation criteria)	**Eval**
2a. COMPOSITE MEASURE SPECIFICATIONS	

In the future, NQF will require measure stewards to provide a URL link to a web page where current detailed specifications can be obtained?
S.1 Do you have a web page where current detailed measure specifications can be obtained? yes
S.2 If yes, provide web page URL: http://content.onlinejacc.org/cgi/reprint/j.jacc.2007.04.033v1.pdf

2a. Precisely Specified

2a.0.1 Components of the Composite (*List the components, i.e., domains/sub-composites, individual measures. If component measures are NQF-endorsed, include NQF measure number*; if not NQF-endorsed, provide date of submission to NQF)
This measure supports two NQF-endorsed measures related to referral to cardiac rehabilitation/secondary prevention programs (0642, 0643) and was submitted in April 2009, along with three other paired measures related to assuring quality cardiac rehabilitation/secondary prevention programs. These four CR program measures were not approved at that time and are now being resubmitted after additional testing has been completed.

If the composite measure cannot be specified with a numerator and denominator, please consult with NQF staff.

If the component measures are combined at the aggregate level, do not include the individual measure specifications below.

2a.1 Composite Numerator Statement: The cardiac rehabilitation/secondary prevention (CR) program has all 11 processes in place for an individualized assessment and evaluation of modifiable cardiovascular risk factors, development of individualized interventions, and communication with other health care providers.

2a.2 Numerator Time Window: Per reporting year

2a.3 Numerator Details:
For each eligible patient enrolled in the CR program, there is documentation that specific criteria related to modifiable cardiovascular risk factors and communication with other health care providers has been met. For modifiable risk factors, this includes initial assessment, development of an intervention plan, reassessment prior to completion of the program, and communication with appropriate health care providers about modifiable risk factors, factors that affect risk factor modification, and progress toward goals.

These modifiable cardiovascular risk factors include:
A. Individualized assessment of tobacco use
B. Individualized assessment of blood pressure control
C. Individualized assessment of optimal lipid control
D. Individualized assessment of physical activity habits
E. Individualized assessment of weight management
F. Individualized assessment of the diagnosis of diabetes mellitus or impaired fasting glucose
G. Individualized assessment of the presence or absence of depression
H. Individualized assessment of exercise capacity
I. Individualized adherence to preventive medications
Specific details about assessment, development of an intervention plan, and communication with health care providers is included at this url: Http://content.onlinejacc.org/cgi/reprint/j.jacc.2007.04.033v1.pdf from the AACVPR/ACC/AHA 2007 Performance Measures on Cardiac Rehabilitation/Secondary Prevention Services- see page 1421-1430

J. Communication with Health Care Providers
1. There is a policy in place to assure communication with health care providers, including individual patient status related to each modifiable risk factor at entrance to and completion of the cardiac rehabilitation/secondary prevention (CR) program, as well as when thresholds are met for more frequent or urgent communication concerning suboptimal risk factor control.

2a-specs
C☐ **P**☐ **M**☐ **N**☐

Comment [KP7]: 2a. The composite measure is well defined and precisely specified so that it can be implemented consistently within and across organizations and allow for comparability. Composite specifications include methods for standardizing scales across component scores, scoring rules (i.e., how the component scores are combined or aggregated), weighting rules (i.e., whether all component scores are given equal or differential weighting when combined into the composite), handling of missing data, and required sample sizes.

2a.4 Composite Denominator Statement: All CR Programs

2a.5 Target Population Gender ☒ Female ☒ Male
2a.6 Target Population Age range 18 or older

2a.7 Denominator Time Window: Per reporting year

2a.8 Denominator Details: none

2a.9 Composite Denominator Exclusions: none

2a.10 Denominator Exclusion Details: none

2a.11 Stratification Details/Variables (*All information required to stratify the measure including the stratification variables, all codes, logic, and definitions***):**
stratification not needed

2a.18 Type of Score: (select one) **2a.19** If "Other", please describe:

2a.20 Interpretation of Score (*Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score*) (select one)

2a.42 Method of Scoring/Aggregation: all/any-or-none **2a.43 If "other" scoring method, describe:**

2a.44 Missing Component Scores (*Indicate how missing component scores are handled*): Need to have submitted complete information to be valid

2a.45 Weighting: ☒ **Equal** ☐ **Differential** **2a.46 If differential weighting, describe:**

2a.21 Calculation Algorithm (*Describe the calculation of the measure as a flowchart or series of steps*)**:**
none

2a.22 Describe the method for discriminating performance *(e.g., significance testing)***:**
Cardiac rehabilitation programs submit documentation to reviewers that includes the Individual Treatment Plan, which demonstrates their methodology to assess, reassess, develop individual interventions, and communicate about modifiable risk factors. They also provide information about their process for feedback to physicians. Please refer to pages 13 and 14 of the AACVPR Certification application located at http://www.aacvpr.org/Portals/0/CardioCert_ScreenShots.pdf
and a sample Individual Treatment Plan, located at http://www.aacvpr.org/Portals/0/Cardiac_ITP_2.pdf

2a.23 Sampling (Survey) Methodology *If measure is based on a sample (or survey), provide instructions for obtaining the sample (or conducting the survey) and guidance on minimum sample size (response rate)*:
This measure is not based on a sample.

2a.24 Data Source *Check all the source(s) used in the component measures.*

- ☒ Documentation of original self-assessment *(e.g., SF-36)*
- ☐ Electronic administrative data/ claims
- ☐ Electronic Clinical Data *(e.g., MDS)*
- ☒ Electronic Health/Medical Record
- ☐ External audit
- ☐ Lab data
- ☐ **M**anagement data
- ☒ Organizational policies and procedures
- ☒ Paper Medical Record/flowsheet
- ☐ Pharmacy data
- ☐ Public health data/vital statistics
- ☐ Registry data
- ☐ Survey-patient *(e.g., CAHPS)*
- ☐ Survey-provider
- ☐ Special or unique data, specify:

2a.25 Data source or collection instrument (*Identify the specific data source or data collection instrument, e.g. name of database, clinical registry, collection instrument, etc.*): AACVPR Certification located at http://www.aacvpr.org/Portals/0/CardioCert_ScreenShots.pdf , Sample Individual Plan of Care located at http://www.aacvpr.org/Portals/0/Cardiac_ITP_2.pdf

2a.26 Data source/data collection instrument attached ☐ **OR 2a.27 at web page URL:** see above

2a.29 Data dictionary/code table attached ☐ **OR 2a.30 at web page URL:**

2a.32 Level of Measurement/Analysis (*Check the level for which the measure is specified and tested*)

Clinicians: ☐ Individual ☒ Group ☐ Other
☒ Facility/Agency (e.g., hospital, nursing home)
☐ Health plan
☒ Integrated delivery system
☒ **M**ulti-site/corporate chain
Population: ☐ National ☐ Regional/network
☐ State ☐ Counties/Cities

☐ Prescription drug plan

Program: ☐ Disease management ☐ QIO
☐ Other

☐ Measured at all levels
☐ Other (*Please describe*):

2a.26 Care Settings (*Check the settings for which the measure is specified and tested; check all that apply*)
Ambulatory Care: ☐ Amb Surgery Center ☒ Office ☒ Clinic ☐ Emergency Dept ☒ Hospital Outpatient

☐ Assisted Living
☐ Behavioral health/psychiatric unit
☐ Dialysis Facility
☐ Emergency medical services/ambulance
☐ Group Home
☐ Home
☐ Hospice

☐ Hospital
☐ Long term acute care hospital
☐ Nursing home/ Skilled Nursing Facility (SNF)
☒ Rehabilitation Facility
☐ All settings
☐ Unspecified or "not applicable"
☐ Other (*Please describe*):

2a.38 Clinical Services (*Healthcare services being measured; all that apply.*)

Behavioral Health:
- ☐ Mental health
- ☐ Substance use treatment
- ☐ Other

Clinicians:
- ☐ Audiologist
- ☐ Chiropractor
- ☐ Dentist/Oral surgeon
- ☒ Dietician/Nutritional professional
- ☒ Nurses
- ☐ Optometrist
- ☒ PA/NP/Advanced Practice Nurse
- ☐ Pharmacist
- ☒ Physicians (MD/DO)
- ☐ Podiatrist
- ☒ Psychologist/LCSW
- ☒ PT/OT/Speech
- ☐ Respiratory Therapy
- ☐ Other

☐ Dialysis
☐ Home health
☐ Hospice/Palliative care
☐ Imaging services
☐ Laboratory
☒ Other exercise specialists

If the component measures are combined at the patient level and include outcomes, complete the following

2a.12 Risk Adjustment Type: ☒ No risk adjustment necessary ☐ analysis by subgroup ☐ case-mix adjustment ☐ paired data at patient level ☐ risk-adjustment devised specifically for this measure/condition ☐ risk adjustment method widely or commercially available
☐ Other (specify) **2a.13**

2a.14 Risk Adjustment Methodology/Variables (*List risk adjustment variables and describe conceptual models, statistical models, or other aspects of model or method***):**

2a.15 Detailed risk model attached ☐ **OR 2a.16 at web page URL:**

TESTING/ANALYSIS

2i. Component item/measure analysis to justify inclusion in composite — **2i** C☐ P☐

2i.1 Data/sample: The component items for this measure were developed by the AACVPR/ACC/AHA Cardiac

Comment [KP8]: 2i. Component item/measure analysis (e.g., various correlation analyses such as internal consistency reliability), demonstrates that the included component items/measures fit the conceptual construct;
OR
justification and results for alternative analyses are provided.

Rehabilitation/Secondary Prevention Performance Measures Writing Committee, initially convened in 2005. The Writing Committee was composed of appointed representatives from the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR), the American College of Cardiology (ACC), and the American Heart Association (AHA), including past and current representatives of the ACC Task Force on Performance Measures, past and current presidents of AACVPR, and clinicians with expertise in general clinical cardiology, heart failure, cardiovascular disease, and cardiac rehabilitation. The Writing Committee initially identified 39 factors from various practice guidelines and other reports that were considered potential performance measures for the Cardiac Rehabilitation/Secondary Prevention Performance Measurement Sets based on the level of evidence and strength of recommendation. These 39 measures were then evaluated according to guidelines established by the ACC/AHA Task Force on Performance Measures. Those measures that were deemed to be most evidence-based, interpretable, actionable, clinically meaningful, valid, reliable, and feasible were included in the final performance measurement sets. After the measures were identified, the Writing Committee discussed and refined these measures, developing the definition, content, and other details during 2006. The measurement set underwent a public comment period from December 11, 2006 until January 11, 2007, and the final document was published in the journals of all three associations in September 2007, endorsed by 10 other professional associations. This document can be found at Http://content.onlinejacc.org/cgi/reprint/j.jacc.2007.04.033v1.pdf 2i.2 **Analytic Method:** Evaluation of evidence and expert consensus as outlined above 2i.3 **Results:** Development of the component items in this composite measure	M☐ N☐
2j. Component item/measure analysis of contribution to variability in composite score 2j.1 **Data/sample:** Measures are weighted equally, so this does not apply. 2j.2 **Analytic Method:** 2j.3 **Results:**	2j C☐ P☐ M☐ N☐
2k. Analysis to support differential weighting of component scores 2k.1 **Data/sample:** Measures are weighted equally, so this does not apply. 2k.2 **Analytic Method:** 2k.3 **Results:** 2k.4 **Describe how the method of scoring/aggregation achieves the stated purpose and represents the quality construct:** 2k.5 **Indicate if any alternative scoring/aggregation methods were tested and why not chosen:**	2k C☐ P☐ M☐ N☐
2l. Analysis of missing component scores 2l.1 **Data/sample:** All components must be present for measure to be valid 2l.2 **Analytic Method:** 2l.3 **Results:**	2l C☐ P☐ M☐ N☐
2b. Reliability testing of composite score 2b.1 Data/sample *(description of data/sample and size)*: Because the AACVPR cardiac rehabilitation program certification and recertification process requires documentation that programs are compliant with this measure, inter-rater reliability testing was performed for a subset of records submitted for program certification in 2010. AACVPR certification is a process that helps programs improve care and meet essential standards via application of performance measures and guidelines. Currently, there are 1,147 AACVPR certified programs in the United States. In 2009, specific steps were taken to improve Inter-Rater Reliability related to the certification and recertification process. These steps were as follows: : 1) Pre-	2b C☐ P☐ M☐ N☐

Comment [KP9]: 2j. Component item/measure analysis demonstrates that the included components contribute to the variation in the overall composite score;
OR
if not, justification for inclusion is provided.

Comment [KP10]: 2k. The scoring/aggregation and weighting rules are consistent with the conceptual construct. (Simple, equal weighting is often preferred unless differential weighting is justified. Differential weights are determined by empirical analyses or a systematic assessment of expert opinion or values-based priorities.)

Comment [KP11]: 2l. Analysis of missing component scores supports the specifications for scoring/aggregation and handling of missing component scores.

Comment [KP12]: 2b. Reliability testing of the composite measure demonstrates the results are repeatable, producing the same results a high proportion of the time when assessed in the same population in the same time period.

examination training for all examiners completed by interactive webinar, 2) Limit response of examiners to pre-approved text unless approved by committee chair, 3) Applications not meeting full certification requirements must be presented to and approved by the Chair prior to determination being finalized, 4) Examiners will use the period between first and second review of applications (April to July) to remediate with applicants who have outstanding issues, 5) Chairs will be issued fewer applications for review to enable them to support the examiners in their remediation efforts, 6) the Appeals Task Force will be required to complete the interactive webinar-based examiner training prior to reviewing and scoring appeals, 7) Chairs will meet after the examination process to abstract and review a limited sampling from each examiner to ensure consistency in scoring and standards interpretation, 8)identified inter-examiner variances will be addressed on an individual basis by the respective chair (Certification or Recertification) who will provide direct one on one or group (if indicated) training regarding the observed variances, and said variance will be highlighted in the next annual training program, and 9) considerable time and expense have and will continue to be applied to the annual review of application questions to refine the validity and clarity of each component of the application. Subsequently, during 2010, a subset of 30 program applications was tested for inter-rater reliability.

2b.2 Analytic Method *(type of reliability & rationale, method for testing)*: Inter-Rater Reliability: Inter-rater reliability testing was performed by 6 experienced AACVPR certification reviewers on a total of 30 records submitted for program certification in 2010. Each reviewer re-reviewed each application to determine acceptance or denial of certification, blinded to the original decision and name of the facility. In addition, no reviewer was given a program he/she had initially reviewed. Certification is an all or none phenomenon - there must be evidence for compliance with all measures in order for a program to be certified. Therefore, agreement about whether to certify or deny also confirms agreement about compliance with this particular measure related to program safety. Cohen's Unweighted Kappa testing was used to determine degree of inter-rater agreement.

2b.3 Testing Results *(reliability statistics, assessment of adequacy in the context of norms for the test conducted)*:

INTER-RATER RELIABILITY: 24 of the applications that were initially approved for certification were also approved on second review (approved/approved). 4 of the applications that were initially denied certification were also denied on second review (denied/denied). 2 of the applications that were initially approved for certification were scored as denied second review (approved/denied). There were no applications that were initially denied that were then scored as approved on second review (denied/approved). Analysis for Cohen's Unweighted Kappa was performed and revealed a coefficient of 0.7619. According to the scale for agreement established by Landis and Koch in 1977 (0.41 – 0.60 "moderate agreement"; 0.61 – 0.80 "substantial agreement"; and 0.81 – 1.00 "almost perfect agreement") a kappa coefficient of 0.7619 places the inter-rater reliability of the measure set firmly in the high end of "substantial agreement".

2c. Validity testing of composite score

2c.1 Data/sample *(description of data/sample and size)***: CONTENT/CONTEXT VALIDITY**: To determine the content/context validity of the measures, a Delphi like peer review process was utilized. An explicit part of all ACCF/AHA performance measures development is conducting a formal 30 day public comment period. Reviewers were asked to provide comments on the document on the basis of the rating form and guide shown on page 1432 at Http://content.onlinejacc.org/cgi/reprint/j.jacc.2007.04.033v1.pdf
Content/context validity of the measures were established by virtue of the specialized expertise of the Performance Measures Work Group members who were involved in identifying and drafting the performance measures (all leaders and experts in the field of cardiac rehabilitation as chosen by the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR), the American College of Cardiology (ACC), and the American Heart Association (AHA), as well as the structured discussions that the work group conducted, in addition to rigorous peer review and public comment.
FACE VALIDITY: In addition to determination by the sample experts listed for content and context validity, face validity was also determined through rigorous peer review. A panel of 15 experts in the field of cardiac rehabilitation was contacted through an online survey tool and asked to rate each measure according to the following statement: "*In my expert opinion, the details of the measure xx describe high quality safety standards for a cardiac rehabilitation program.*" Reviewers were aware that they were rating the performance measure set, but were blinded to information that these results were to be made available to NQF as part of the performance measure submission process. A four-point forced choice Likert scale was utilized to eliminate the possibility of a reviewer scoring "not applicable" as it was believed that experts at

2c
C ☐
P ☐
M ☐
N ☐

Comment [KP13]: 2c. Validity testing of the composite measure demonstrates that the measure reflects the quality of care provided, adequately distinguishing good and poor quality. If face validity is the only validity addressed, it is systematically assessed.

this level should have an opinion as to the standards applicable to each measure (4 strongly agree; 3 agree; 2 disagree; 1 strongly disagree).
Face validity testing was done in 2010, using a standardized survey available at http://www.surveymonkey.com/sr.aspx?sm=pi5SWz5AviYwauEfNS_2fIBUoS7c5T_2fdgL79YwqnS7NIE_3d.

PREDICTIVE VALIDITY: The Wisconsin Cardiac Rehabilitation Outcomes Registry (WiCORE) is an online database designed to collect individual patient-level data collected at cardiac rehabilitation admission and discharge from diverse programs from around the country (not limited to the state of Wisconsin). It is the most extensive, non-commercial, patient-level database of cardiac rehabilitation outcomes available in the United States. WiCORE is the product of collaboration between WISCPHR (The Wisconsin Society for Cardiovascular and Pulmonary Health and Rehabilitation), HDSP (The State of Wisconsin Heart Disease and Stroke Prevention Program), and DoIT (The University of Wisconsin Department of Information Technology, Office of Collaborative Applications). WiCORE currently has data on over 17,000 patients, with discharge data available for over 12,000 of these records.

2c.2 Analytic Method *(type of validity & rationale, method for testing)***:** CONTENT/CONTEXT VALIDITY: Determined by structured work group discussions, in addition to rigorous peer review and public comment. The steps in the analytic method were: 1. Formation of the Development Committee: This measure was developed by the AACVPR/ACC/AHA Cardiac Rehabilitation/Secondary Prevention Performance Measures Writing Committee, which was initially convened in 2005. The Writing Committee was composed of appointed representatives from the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR), the American College of Cardiology (ACC), and the American Heart Association (AHA), including past and current representatives of the ACC Task Force on Performance Measures, past and current presidents of AACVPR, and clinicians with expertise in general clinical cardiology, heart failure, cardiovascular disease, and cardiac rehabilitation. 2. Identification of Potential Factors for Inclusion: The Writing Committee initially identified 39 factors from various practice guidelines and other reports that were considered potential performance measures for the Cardiac Rehabilitation/Secondary Prevention Performance Measurement Sets based on level of evidence and strength of recommendation from the peer reviewed literature. These 39 measures were then evaluated for inclusion in the initial draft of the measures according to guidelines established by the ACC/AHA Task Force on Performance Measures.Those measures that were deemed to be most evidence-based, interpretable, actionable, clinically meaningful, valid, reliable, and feasible were included in the final performance measurement sets. Once these measures were identified, the Writing Committee then discussed and refined, over a series of months, the definition, content, and other details of each of the selected measures. 3. Scoring of the Factors/Expert Opinion: Utilizing the ACC/AHA system for classification of recommendations and level of evidence for guidelines and clinical recommendations system those measures that were deemed to be most evidence-based, interpretable, actionable, clinically meaningful, valid, reliable, and feasible were included in the final performance measurement sets. 4. Number of Factors Kept: 20 factors were included in the final draft of the performance measures. 5. Refinement of the PM by the Development Committee: After the measures were identified, the Writing Committee discussed and refined these measures, developing the definition, content, and other details during 2006. 6. Public Comment Period/Peer Review: The measurement set underwent a public comment period from December 11, 2006 until January 11, 2007. Peer reviewers were asked to provide comments on the document on the basis of a Likert like rating form assessing the evidence-base for each measure, the interpretability for practitioners of each measure, if the measure were actionable for practitioners, and design elements of each measure including the denominator and numerator. 7. Further Refinement: After the public comment period the measures were identified, the Writing Committee discussed and refined these measures, developing the definition, content, and other details during 2007. The final measure set was approved by the American Association of Cardiovascular and Pulmonary Rehabilitation Board of Directors in May, 2007, the American College of Cardiology Foundation Board of Trustees in April 2007, and by

the American Heart Association Science Advisory and Coordinating Committee in April 2007. The performance measure set was also reviewed via AHA and ACC processes as well as by the AACVPR Document Oversight Committee. 8. Peer Review Publication/Endorsement: The final document was submitted to the Journal of the American College of Cardiology (the official journal of the American College of Cardiology), the Journal of Cardiopulmonary Rehabilitation and Prevention (the official journal of the American Association of Cardiovascular and Pulmonary Rehabilitation) and Circulation (the official journal of the American Heart Association) for peer review and publication.

FACE VALIDITY: The face validity of the measure set was determined via a four step process. 1. Standards of Care: Determined through the process listed for content and context validity. It was determined by this process that this measure has a high face validity, because the standards in this measure are well established as standards of care, including individualized patient assessment for cardiovascular risk and communication with other health care providers about adverse events. 2. Public Comment Period: Face validity assessment is available for this measure, based on data from the public comment period of the AACVPR/ACCF/AHA performance measures that were published in 2007. 3. Testing Via Certification/ Re-certification Process: Currently, compliance with this measure is determined through the AACVPR Program Certification/ Re-certification. AACVPR has developed a national Outcomes Data Registry which allows correlation of compliance with this measure to meaningful clinical outcomes. 4. Peer Review: Face validity was also determined through rigorous peer review. A panel of 15 experts in the field of cardiac rehabilitation were contacted through an online survey tool and were asked to rate each measure according to the following statement: "In my expert opinion, the details of the measure xx describe high quality safety standards for a cardiac rehabilitation program." Reviewers were aware that they were rating the performance measure set, but were blinded to information that these results were to be made available to NQF as part of the performance measure submission process. A four-point forced choice Likert scale was utilized to eliminate the possibility of a reviewer scoring "not applicable" as it was believed that experts at this level should have an opinion as to the standards applicable to each measure (4 strongly agree; 3 agree; 2 disagree; 1strongly disagree).
PREDICTIVE VALIDITY: An analysis has been conducted to examine programmatic structures, utilization and outcomes of the WiCORE dataset. To test the predictive ability of the measure set, outcomes for patients enrolled in cardiac rehabilitation programs that were AACVPR-certified (approximately 40% of the programs currently enrolled in WiCORE) have been compared to outcomes for patient enrolled in programs that were not AACVPR certified in the WiCORE dataset. The analysis tests the hypothesis that AACVPR-certified programs had superior outcomes compared to those that were not certified. Outcomes included in the analysis will be: changes in lifestyle habits (exercise, nutrition, smoking); treatment with and adherence to preventive medications; functional capacity; quality of life; psychological health; re-hospitalization rates; recurrent CVD events and mortality. All data would be adjusted for potential confounders (age, gender, co-morbid conditions and program characteristics.).

2c.3 Testing Results *(statistical results, assessment of adequacy in the context of norms for the test conducted)***: CONTENT/CONTEXT VALIDITY**: In May 2007 the final peer reviewed publication of the performance measures document was approved by the American Association of Cardiovascular and Pulmonary Rehabilitation Board of Directors, the American College of Cardiology Foundation Board of Trustees and by the American Heart Association Science Advisory and Coordinating Committee. Additionally, the publication was endorsed by the American College of Chest Physicians, American College of Sports Medicine, American Physical Therapy Association, Canadian Association of Cardiac Rehabilitation, European Association for Cardiovascular Prevention and Rehabilitation, Inter-American Heart Foundation, National Association of Clinical Nurse Specialists, Preventive Cardiovascular Nurses Association, and the Society of Thoracic Surgeons. The final document was published *the Journal of the American College of Cardiology* (the official journal of the American College of Cardiology), *the Journal of Cardiopulmonary Rehabilitation and Prevention* (the official journal of the American Association of Cardiovascular and Pulmonary

Rehabilitation) and *Circulation* (the official journal of the American Heart Association) in September 2007. The document can be found at http://content.onlinejacc.org/cgi/reprint/j.jacc.2007.04.033v1.pdf.

FACE VALIDITY: A panel of 15 experts in the field of cardiac rehabilitation was contacted through an online survey tool and asked to rate each measure according to the following statement: "*In my expert opinion, the details of the measure xx describe high quality safety standards for a cardiac rehabilitation program.*" Reviewers were aware that they were rating the performance measure set, but were blinded to information that these results were to be made available to NQF as part of the performance measure submission process. A four-point forced choice Likert scale was utilized to eliminate the possibility of a reviewer scoring "not applicable" as it was believed that experts at this level should have an opinion as to the standards applicable to each measure (4 strongly agree; 3 agree; 2 disagree; 1 strongly disagree).

Mean values for each four point forced choice question for this measure were: Tobacco use (3.77); Blood pressure control (3.77); Optimal lipid control (3.69); Physical activity habits (3.77); Weight management (3.77); Diagnosis of diabetes or IFG (3.62); Depression (3.31); Exercise capacity (3.85); Preventive medication education (3.54); Communication with other health care providers (3.77). N for total responders was 13 (86.7% response rate).

Additional testing will be made available by the time the NQF Cardiovascular Steering Committee convenes in February 2011.

2f. Identification of Meaningful Differences in Performance Across Entities

Comment [KP14]: 2f. Methods for scoring and analysis of the composite measure allow for identification of statistically significant and practically/ clinically meaningful differences in performance.

2f.1 Data/sample from Testing or Current Use *(description of data/sample and size)***:** Current use of the assessment of adherence to performance measures is possible through the AACVPR cardiac rehabilitation program certification process. Results from this process identify those programs that do and do not meet the criteria specified in the measures. As mentioned in section 1b.2 above, a number of programs that apply for certification each year are not certified due to the fact that they do meet performance measure and certification criteria. Furthermore, variability in the performance of programs throughout the country is currently being assessed by use of the Wisconsin and Montana Affiliate data registries. These analyses will provide additional information on performance variability by CR programs in the United States.

2f.2 Methods to identify statistically significant and practically/meaningfully differences in performance *(type of analysis & rationale)***:** Methods include the assessment of the percentage of CR programs that meet performance measures and certification criteria among those programs that apply for certification and also among those programs that are included in the Wisconsin and Montana Affiliate data registries.

2f.3 Provide Measure Scores from Testing or Current Use *(description of scores, e.g., distribution by quartile, mean, median, SD, etc.; identification of statistically significant and meaningfully differences in performance)* **:** The American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR) provides a Program Certification/Recertification process to promote quality improvement in CR, which requires that the applicants demonstrate compliance with this measure. As part of the certification process, CR programs are required to demonstrate that they use an individualized treatment plan (ITP) format to assess, track, and communicate about modifiable cardiovascular risk factors and to provide evidence of communication with health care providers about modifiable risk factors. Preliminary outcome results, based on data collection from the statewide Montana Outcomes Registry are presented in this section. More detailed analysis based on the statewide Wisconsin Outcomes Registry, (WiCORE) will be sent in an addendum prior to the NQF February in-person meeting. These results demonstrate that all programs participating in the database, regardless of AACVPR certification, produce positive outcomes. This is not surprising as these programs, just as programs applying for AACVPR certification, represent a skewed sample of all cardiac rehabilitation programs. In order to participate in this database, programs need to be

2f
C☐
P☐
M☐
N☐

constructed to collect, measure and interpret data, These types of programs are more likely to already be following the quality guidelines set forth by certification and outlined in the performance measures. Differences between certified and non-certified programs are highlighted in the text following Tables 2 and 3.

A total of 112 programs, with a total sample (individual patients) size of n = 3050, submitted outcomes data for 2nd quarter (April - June) 2010. Forty-eight (43%) of these programs were AACVPR-certified. All results (except completion rate) were among patients that had Phase II visits completed (either Phase II visits ≥ 12 or number of completed visits were ≥ number of approved visits).

Table 1. Demographic and diagnostic characteristics of cardiac rehab patients, by AACVPR certification, April – June, 2010

	AACVPR-certified N = 1564	Non AACVPR-certified N = 806	P-value
	Mean (SD)	Mean (SD)	
Age (years)	65.8 (11.0)	67.0 (11.1)	0.010
	% (n)	% (n)	
Male	71.6 (1120)	71.2 (574)	0.840
White	93.0 (1454)	94.1 (756)	0.275
Diabetes	27.4 (429)	24.1 (194)	0.078
Diagnosis			
MI only	4.6 (72)	4.6 (37)	0.989
MI/CABG	3.6 (57)	6.6 (53)	0.001
CABG only	30.9 (483)	28.3 (228)	0.192
PCI only	26.7 (417)	27.3 (220)	0.742
MI/PCI	20.0 (313)	19.1 (154)	0.599
Angina	3.9 (61)	7.4 (60)	<0.001
Valve repair/replace	14.0 (219)	11.4 (92)	0.077
Transplant	0.3 (5)	0.5 (4)	0.508
Heart failure	2.3 (36)	2.5 (20)	0.785
Other	3.6 (56)	3.6 (29)	0.983

Table 2. Cardiac rehab indicators from the clinical domain for facilities participating in the Regional Outcomes Project, by AACVPR certification, April – June 2010.

	AACVPR-certified	Non AACVPR-certified	P-value
	% (n)	% (n)	
Three BPs completed	98.6 (1542)	97.5 (786)	0.060
BP at target	87.5 (1350)	88.0 (692)	0.732
LDL result reported	59.4 (929)	51.6 (416)	<0.001
LDL at target	74.4 (691)	72.5 (302)	0.491
On lipid lowering meds*	89.7 (1313)	93.4 (707)	0.004
A1c test complete**	62.0 (266)	59.3 (115)	0.518
Body Mass Index (kg/m^2)†	Mean (SD)	Mean (SD)	
Pre	31.43 (5.15)	31.55 (5.68)	0.615

Post	31.00 (5.07)	31.27 (5.51)	0.662

*Excludes patients with lipid lowering medication contraindication
**Among those with diabetes
†Includes those with both pre- and post- completed and had a pre-BMI $\geq$ 25.0 kg/m^2

AACVPR certified programs scored significantly better than non-certified programs for measuring LDL data, and trended to collected blood pressure on a more consistent basis. However, non-certified programs did have more patients on lipid lowering medications.

Table 3. Cardiac rehab indicators from the health, behavioral and service domains for facilities participating in the Regional Outcomes Project, by AACVPR certification, April – June 2010.

	AACVPR-certified	Non AACVPR-certified	P-value
	% (n)	% (n)	
Smoking			
Pre	13.0 (201)	14.0 (111)	0.495
Post	5.0 (75)	7.0 (54)	0.041
Quality of Life	Mean (SD)	Mean (SD)	
Pre SF-36 Physical	38.71 (9.6)	39.11 (9.5)	0.622
Post SF-36 Physical	47.27 (8.9)	46.02 (9.3)	0.180
Pre SF-36 Mental	48.69 (10.3)	47.67 (12.3)	0.698
Pre SF-36 Mental	53.52 (7.9)	52.72 (9.6)	0.750
Pre Dartmouth	21.73 (5.5)	21.79 (5.5)	0.810
Post Dartmouth	16.71 (4.9)	16.84 (4.9)	0.526
Fat Screener			
Pre	18.46 (9.0)	20.03 (9.1)	0.001
Post	12.9 (7.4)	14.3 (7.8)	< 0.001
Activity - DASI**			
Pre	5.52 (1.7)	5.37 (1.6)	0.094
Post	7.33 (1.9)	7.10 (1.9)	0.012
Depression - PHQ-9***			
Pre	4.98 (4.5)	5.07 (4.7)	0.852
Post	2.83 (3.5)	2.91 (3.7)	0.987
Patient Satisfaction	48.81 (2.8)	48.7 (3.0)	0.386
	% (n)	% (n)	
Completion*	77.4 (1564)	79.1 (806)	0.287

* Excludes patients with missing Phase II visit values (n = 10)
**Duke Activity Status Index
*** Patient Health Questionnaire

AACVPR certified programs had significantly greater success at smoking reduction than non-certified programs, lower dietary fat intake on discharge, and higher DASI (physical activity) scores on discharge.

2h. Disparities in Care

2h.1 If measure is stratified, provide stratified results *(scores by stratified categories/cohorts)***:**
not stratified

2h
C ☐
P ☐
M ☐
N ☐
NA ☐

Comment [KP15]: 2h. If disparities in care have been identified, measure specifications, scoring, and analysis allow for identification of disparities through stratification of results (e.g., by race, ethnicity, socioeconomic status, gender);
OR
rationale/data justifies why stratification is not necessary or not feasible.

2h.2 If disparities have been reported/identified, but measure is not specified to detect disparities, provide follow-up plans: N/A	
If the component measures are combined at the patient level, complete 2d. **2d. Exclusions Justified** **2d.1 Summary of Evidence supporting exclusion(s):** no exclusions **2d.2 Citations for Evidence:** **2d.3 Data/sample** *(description of data/sample and size)*: **2d.4 Analytic Method** *(type analysis & rationale)*: **2d.5 Testing Results** *(e.g., frequency, variability, sensitivity analyses)*:	**2d** H☐ M☐ L☐ N☐ NA☐
If the component measures are combined at the patient level and include outcomes, complete 2e. **2e. Risk Adjustment** **2e.1 Data/sample** *(description of data/sample and size)*: outcomes not included **2e.2 Analytic Method** *(type of risk adjustment, analysis, & rationale)*: **2e.3 Testing Results** *(risk model performance metrics)*: **2e.4 If outcome or resource use measure is not risk adjusted, provide rationale:**	**2e** H☐ M☐ L☐ N☐ NA☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Scientific Acceptability of Measure Properties?*	**2**
Steering Committee: Overall, to what extent was the criterion, *Scientific Acceptability of Measure Properties*, **met?** **Rationale:**	*2* C☐ P☐ M☐ N☐
3. USABILITY	
Extent to which intended audiences (e.g., consumers, purchasers, providers, policy makers) can understand the results of the measure and are likely to find them useful for decision making. (composite measure evaluation criteria)	**Eval**
3a. Meaningful, Understandable, and Useful Information **3a.1 Current Use:** ☒ In use ☐ Not in use **3a.2 Use in a public reporting initiative (disclosure of performance results to the public at large)** (*If used in a public reporting initiative, provide name of initiative(s), locations, Web page URL(s). If not publicly reported, state the plans to achieve public reporting within 3 years*): This measure is incorporated into the AACVPR Certification and Recertification program and certified CR programs are identified in the AACVPR Program Directory, which is publicly available on several websites, including those listed below: AACVPR Certified Program Directory - Searchable Program Directory for patients and healthcare practitioners http://www.aacvpr.org/Resources/SearchableCertifiedProgramDirectory/tabid/113/Default.aspx AHA cardiac rehabilitation education web site: http://www.heart.org/HEARTORG/Conditions/More/CardiacRehab/What-is-Cardiac-Rehabilitation_UCM_307049_Article.jsp Society for Cardiovascular Angiography and Interventions (SCAI) Seconds- Count cardiac rehabilitation education webpage:	**3a** C☐ P☐ M☐ N☐

Rating: C=Completely; P=Partially; M=Minimally; N=Not at all; NA=Not applicable

Comment [KP16]: 2d. Clinically necessary measure exclusions are identified and must be:
•supported by evidence of sufficient frequency of occurrence so that results are distorted without the exclusion;
AND
•a clinically appropriate exception (e.g., contraindication) to eligibility for the measure focus;
AND
•precisely defined and specified:
–if there is substantial variability in exclusions across providers, the measure is specified so that exclusions are computable and the effect on the measure is transparent (i.e., impact clearly delineated, such as number of cases excluded, exclusion rates by type of exclusion);
if patient preference (e.g., informed decision-making) is a basis for exclusion, there must be evidence that it strongly impacts performance on the measure and the measure must be specified so that the information about patient preference and the effect on the measure is transparent (e.g., numerator category computed separately, denominator exclusion category computed separately).

Comment [KP17]: 2e. For outcome measures and other measures (e.g., resource use) when indicated:
•an evidence-based risk-adjustment strategy (e.g., risk models, risk stratification) is specified and is based on patient clinical factors that influence the measured outcome (but not disparities in care) and are present at start of care; OR
rationale/data support no risk adjustment.

Comment [KP18]: 3a. Demonstration that information produced by the composite measure is meaningful, understandable, and useful to the intended audience(s) for both public reporting (e.g., focus group, cognitive testing) and informing quality improvement (e.g., quality improvement initiatives).

http://www.scai.org/SecondsCount/Treatment/cardiacrehab.aspx

3a.3 If used in other programs/initiatives (*If used in quality improvement or other programs/initiatives, name of initiative(s), locations, Web page URL(s). If not used for QI, state the plans to achieve use for QI within 3 years***):**
Although this measure is not currently publicly reported, its components are included in the AACVPR Certification and Recertification application. Currently, there are a total of 1,147 AACVPR certified cardiac rehabilitation/secondary prevention programs in the United States, which is approximately <40% of eligible programs. A link to AACVPR Certified programs is found at http://www.aacvpr.org/Resources/SearchableCertifiedProgramDirectory/tabid/113/Default.aspx. These measures are used for quality improvement initiatives. For example, the Montana Outcomes project has used information from CR reporting of modifiable risk factors such as functional capacity, dietary fat consumption, and BP pressure measurement to develop three multi-state outcomes projects. Data reported from CR programs showed variation in functional capacity outcomes. Research into why some programs were under-performers revealed conservative exercise prescription and failure to encourage exercise on days that patients were not attending CR sessions. After intervention, which consisted of a webinar about appropriate exercise prescription and home walking programs, aggregate data revealed an increase in functional capacity from 28% improvement after CR to 39% improvement, compared to baseline. The Montana Outcomes project also helped under-performing CR programs improve outcomes related to dietary fat intake. The intervention program consisted of a webinar by a registered dietitian to CR staff, including access to patient education slides and handouts. After intervention, aggregate outcomes data related to reported dietary fat intake improved from 24% improvement in fat intake prior to intervention to 29% improvement. Finally, this registry was used to identify disparities related to blood pressure measurement in CR and to correct these disparities. Interventions included institution of JNC guidelines, patient education related to sodium, weight loss, medication compliance, physician communication, and encouraging exercise. Prior to the intervention (April to June, 2009), 81% met goal criteria for blood pressure control. Post intervention (July to September, 2009), 97% met goal criteria for BP control.

Testing of Interpretability (*Testing that demonstrates the results are understood by the potential users for public reporting and quality improvement*)

3a.4 Data/sample *(description of data/sample and size)***:** No specific testing of interpretability is needed, as development of individual treatment plans after patient assessment and communication with other health care providers is a standard of care for CR. This process has been a required element of AACVPR Program Certification/Recertification for many years and is currently required, as reflected on pages 13 and 14 of the Certification application. In fact, during a recent national AACVPR survey of CR Program Directors (n=173), who treat patients in a variety of settings ranging from rural to suburban to urban, 96.0% included patient assessment of risk for CV events in their operations policies and procedures. In addition, the value of AACVPR certification, which includes compliance with this measure, is understood by other health care professionals and the public, as reflected by inclusion of the AACVPR Certified Program Directory in the American Heart Association Cardiac Rehabilitation Web and the Society for Cardiovascular Angiography and Intervention web pages.

Additionally, several CR registry projects have been recording the modifiable cardiac risk factors from the core components of CR for years. For example, the Wisconsin affiliate of AACVPR's registry (WiCORE) registered 17,001 patients between July 2008 and January, 2010 and the Montana Outcomes Project Registry has nearly 100 sites from 12 states, with 15,000 registered patients. Data reported to these registries are abstracted from the individualized treatment plans used by CR programs.

3a.5 Methods *(methods, e.g., focus group, survey, QI project)***:**
Http://www.surveymonkey.com/sr.aspx?sm=S51wfjUseS_2f8aUeiTSmypJGplpYqAKypO9ARIij_2bWXQ_3d
http://www.heart.org/HEARTORG/Conditions/More/CardiacRehab/What-is-Cardiac-Rehabilitation_UCM_307049_Article.jsp
http://www.scai.org/SecondsCount/Treatment/cardiacrehab.aspx

3a.6 Results *(qualitative and/or quantitative results and conclusions)***:** See above

3b/3c. Relation to other NQF-endorsed measures

Identify similar or related NQF-endorsed measures to components and/or composite

3b.1 NQF # and Title of similar or related measures:

0642 Cardiac rehabilitation referral from inpatient setting
0643 Cardiac rehabilitation referral from outpatient setting
0013 Blood pressure management
0017 Hypertension plan of care
0018 Controlling high blood pressure
0023 Body Mass Index (BMI) in adults > 18 years of age
0028 Measure pair: a. Tobacco Use Assessment, b. Tobacco Cessation Intervention
0029 Counseling on physical activity in older adults - a. Discussing Physical Activity, b. Advising Physical Activity
0057 Hemoglobin A1c testing0059 Hemoglobin A1c management
0061 Blood pressure measurement
0063 Lipid profile
0064 Measure Pair: a. Lipid management: low density lipoprotein cholesterol (LDL-C) <130, b. Lipid management: LDL-C <100
0065 Coronary artery disease (CAD): Symptom and activity assessment
0066 CAD: ACE inhibitor/angiotensin receptor blocker (ARB) therapy
0067 CAD: Antiplatelet therapy
0068 Ischemic Vascular Disease (IVD): Use of aspirin or another antithrombotic
0070 CAD: Beta-Blocker therapy-prior myocardial infarction (MI
0071 Acute Myocardial Infarction (AMI): Persistence of beta-blocker treatment after a heart attack
0072 CAD: Beta-blocker treatment after a heart attack
0073 IVD: Blood pressure management
0074 CAD: Drug therapy for lowering LDL-cholesterol
0075 IVD: Complete lipid profile and LDL control <100
0076 CAD: optimally managed modifiable risk
0103 Major Depressive Disorder: Diagnostic evaluation
0104 Major Depressive Disorder: Suicide risk assessment
0105 New Episode of Depression: a. Optimal practitioner contacts for medication management, b. Effective acute phase treatment, c. Effective continuation phase treatment
0116 Anti-Platelet medication at discharge
0117 Beta blockade at discharge
0118 Anti-lipid treatment discharge
0136 Detailed discharge instructions
0142 Aspirin prescribed at discharge for AMI
0157 Smoking cessation counseling for acute myocardial infarction
0160 Beta blocker prescribed at discharge for AMI
0167 Improvement in ambulation/locomotion
0237 Anti-platelet medication on discharge
0238 Beta blocker on discharge
0260 Assessment of Health-related Quality of Life (Physical & Mental Functioning)

(for NQF staff use) **Notes on similar/related endorsed or submitted measures:**

3b. Harmonization

3b.2 Are the component measure specifications harmonized, or if not, why?

The component measures included in this measure are harmonized with the existing measures related to Referral to Cardiac Rehabilitation from Inpatient and Outpatient Settings, as well as with the measure specifications for the modifiable cardiovascular risk factors and care coordination activities in measures listed above. Note that the components of this measure are based on the core components of cardiac rehabilitation/secondary prevention programs, as stated in the AHA/AACVPR Core Components of Cardiac Rehabilitation/Secondary Prevention Programs Scientific Statement, and were developed using guidelines from the ACC/AHA Task Force on Performance Measures as outlined in 2i.1.

3b
C ☐
P ☐
M ☐
N ☐
NA ☐

3c. Distinctive or Additive Value

3c.1 Describe the distinctive, improved, or additive value this measure provides to existing NQF-endorsed measures:

3c
C ☐
P ☐

Comment [KP19]: **3b.** The component measure specifications are harmonized.

Comment [KP20]: **3c.** Review of existing endorsed measures and measure sets demonstrates that the composite measure provides a distinctive or additive value to existing NQF-endorsed measures (e.g., provides a more complete picture of quality for a particular condition or aspect of healthcare).

This measure and its paired measures (safety standards for CR, risk assessment for adverse events, and monitoring response to therapy and program effectiveness) will be used to promote quality improvement in secondary prevention/cardiac rehabilitation programs. Although several of these new measures are based on existing measures, they were explicitly developed to promote quality cardiac rehabilitation/secondary prevention programs. This composite performance measure stresses the cycle of patient assessment, individualized treatment plan, communication with health care professionals, reassessment and repeat communication, and was developed to augment care coordination for patients with cardiovascular disease.

M☐ N☐

5.1 **Competing Measures** **If this measure is similar to measure(s) already endorsed by NQF (i.e., on the same topic and the same target population), describe why it is a more valid or efficient way to measure quality:**
no competing measures

Comment [k21]: 5. Demonstration that the measure is superior to competing measures – new submissions and/or endorsed measures (e.g., is a more valid or efficient way to measure).

3d. Decomposition of Composite
3d.1 **Describe the information that is available from decomposing the composite into its components:** Data detail is included in individual treatment plan documentation and registries record individual modifiable risk factor outcomes abstracted from these documents. As noted above, these registries can decompose the composite into its components, analyze data to identify underperforming programs, and evaluate quality improvement projects to improve modifiable risk factors.

3d
C☐ P☐ M☐ N☐

Comment [KP22]: 3d. Data detail is maintained such that the composite measure can be decomposed into its components to facilitate transparency and understanding.

3e. Achieved stated purpose
3e.1 **Describe how the scores from testing or use reported in 2f demonstrate that the composite achieves the stated purpose:** Variability in the performance of CR programs with regards to this composite measure has been documented through the AACVPR CR Program Certification process, as noted in section 2f above, and continues to be a key tool for practice improvement for CR programs.

3e
C☐ P☐ M☐ N☐

Comment [KP23]: 3e. Demonstration (through pilot testing or operational data) that the composite measure achieves the stated purpose/objective.

TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Usability*?

3

Steering Committee: Overall, to what extent was the criterion, *Usability*, **met?**
Rationale:

3
C☐ P☐ M☐ N☐

4. FEASIBILITY

Extent to which the required data are readily available, retrievable without undue burden, and can be implemented for performance measurement. (composite measure evaluation criteria)

Eval

4a. Data Generated as a Byproduct of Care Processes
4a.1 **How are all the data elements that are needed to compute measure scores generated?** (*Check all that apply)*
☒ Data are generated as a byproduct of care processes during care delivery (*Data are generated and used by healthcare personnel during the provision of care, e.g., blood pressure, lab value, medical condition)*
☐ Coding/abstraction performed by someone other than person obtaining original information *(e.g., DRG, ICD-9 codes on claims; chart abstraction for quality measure, registry)*
☐ Survey
☐ Other *(e.g., patient experience of care surveys, provider surveys, observation)*, *Please describe*:

4a
C☐ P☐ M☐ N☐

Comment [KP24]: 4a. For clinical composite measures, overall the required data elements are routinely generated concurrent with and as a byproduct of care processes during care delivery.

4b. Electronic Sources
4b.1 **Are all the data elements available electronically?** (*elements that are needed to compute measure scores are in defined, computer-readable fields, e.g., electronic health record, electronic claims*)
☒ Yes ☐ No
4b.2 **If no, specify the near-term path to achieve electronic capture by most providers.**
Some CR programs currently use electronic medical records; others continue to use paper charts. However, submission of the Individualize Treatment Plans, along with information about use of the plans and communication with other health care professionals, is submitted electronically at http://www.aacvpr.org/Portals/0/CardioCert_ScreenShots.pdf

Note: Measure stewards will be asked to specify the data elements for electronic health records at a later date

4b
C☐ P☐ M☐ N☐

Comment [KP25]: 4b. The required data elements for the composite overall are available in electronic sources.

4d. Susceptibility to Inaccuracies, Errors, or Unintended Consequences

4d

Comment [KP26]: 4d. Susceptibility to inaccuracies, errors, or unintended consequences and the ability to audit the data items to detect such problems are identified.

4d.1 Identify susceptibility to inaccuracies, errors, or unintended consequences of the measure and describe how these potential problems could be audited. If audited, provide results.
Because the data collection process includes review of individualized plans of care, it is possible that the CR staff is not consistently using these forms and this system for all patients. Currently, the AACVPR Certification process includes additional inquiries and submission of additional data if it is suspected that the program is not in compliance with this measure. In addition, sites audits can be used to verify compliance with certification requirements.

C☐ P☐ M☐ N☐

4e. Data Collection Strategy/Implementation

4e.1 Describe what you have learned/modified as a result of testing and/or operational use of the composite/component measures regarding data collection, availability of data/missing data, timing/frequency of data collection, patient confidentiality, time/cost of data collection, other feasibility/ implementation issues:
The AACVPR Program Certification process has been in place for more than a decade and there are currently 1147 certified programs in the United States, which is less than 40% of all programs. The certification process has evolved from a paper based system with subjective review by peers, including a level of state review, to an electronic based system with separate volunteer review, process/oversight, and contents groups. Over the past several years, process improvements have included using state volunteer groups as mentors to assure that data and elements are not missing, returning submitted material that does not meet HIPAA criteria, standardized reviewer tools, and training for volunteer reviewers. Observed variances in examiner scoring of similar content applicant responses have lead to changes in the scoring process to improve inter-rater reliability. In addition, a sample Individual Treatment Plan form was developed to help CR programs record and track issues related to modifiable risk factors for individual patients.

Individualized Assessment of Tobacco Use numerator component- This measure relies on patient self-report.

Individualized Assessment of Physical Activity Habits numerator component- Community-based exercise may not utilize modalities designed for elderly patients and those with neurological and musculoskeletal disease, making continued regular physical activity a challenge for some patients.

Individualized Assessment of Weight Management numerator component- Weight management relies on patient compliance with diet and lifestyle recommendations.

Individualized Assessment of the Diagnosis of Diabetes Mellitus (DM) or Impaired Fasting Glucose (IFG) numerator component- Patients may not be aware that they have IFG or DM. In addition, it may be difficult for CR staff to obtain medical records to verify or refute the diagnosis. Given the latter, either patient self-report or medical records, if available, may be used to meet these criteria.

Individualized Assessment of the Presence or Absence of Depression numerator component. Depression screening includes patient self-report, but validated self-report tools are available to help facilitate screening for depression.

Individualized Adherence to Preventive Medications numerator component-Rehabilitation teams need to understand how current clinical practice guidelines relate to individual patients in order to optimize education.

Communication With Health Care Providers numerator component- CR programs may not have access to all data related to risk factor control, such as most recent lipid profile HbA1c, or patient-specific contraindications to preventive medications.
A link to AACVPR Certified programs is found at
http://www.aacvpr.org/Resources/SearchableCertifiedProgramDirectory/tabid/113/Default.aspx

4.2 Costs to implement the measure (*costs of data collection, fees associated with proprietary measures*)**:**
The cost of Certification in 2010 was $600 and Recertification was $500. The price will be raised in 2011 to $650 and $550 respectively.

4e.3 Evidence for costs: AACVPR is a not-for-profit organization and the cost of certification and recertification is used to support the electronic submission process, staff time, and volunteer travel expenses needed to support the Certification/Recertification program.

4e.4 Business case documentation: See above for details. This is a relatively low-cost process, linked to a

4e
C☐ P☐ M☐ N☐

Comment [KP27]: 4e. Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, etc.) for obtaining all component measures can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use).

large body of evidence that both performance improvement and CR can significantly improve patient outcomes.	
If the component measures are combined at the patient level, complete 4c. **4c. Exclusions** 4c.1 **Do the specified exclusions require additional data sources beyond what is required for the numerator and denominator specifications?** ☒ No ☐ Yes ▶**If yes, provide justification**	**4c** **H**☐ **M**☐ **L**☐ **N**☐ **NA**☐
TAP/Workgroup: What are the strengths and weaknesses in relation to the subcriteria for *Feasibility*?	**4**
Steering Committee: Overall, to what extent was the criterion, *Feasibility*, met? **Rationale:**	**4** **C**☐ **P**☐ **M**☐ **N**☐
RECOMMENDATION	
Steering Committee: Do you recommend for endorsement? **Comments:**	**Y**☐ **N**☐ **A**☐

Comment [KP28]: 4c. Exclusions should not require additional data sources beyond what is required for scoring the measure (e.g., numerator and denominator) unless justified as supporting measure validity.

CONTACT INFORMATION

Co.1 **Measure Steward (Intellectual Property Owner)**
Organization: American Association of Cardiovascular and Pulmonary Rehabilitation/American College of Cardiology Foundation/American Heart Association
Street Address: 2400 N. St. NW **City:** District of Columbia **State:** **ZIP:** 20037

Co.2 **Point of Contact: First Name:** Jensen **Last Name:** Chiu **Credentials (MD, MPH, etc.):** MHA
Email: jensen.chiu@acc.org **Telephone:** 202-375-6285 ext:

Co.3 **Measure Developer If different from Measure Steward**
Organization:
Street Address: **City:** **State:** **ZIP:**

Co.4 **Point of Contact: First Name:** **Last Name:** **Credentials (MD, MPH, etc.):**
Email: **Telephone:** ext:

Co.5 **Submitter**
Organization: ☒ Measure Steward ☐ Measure Developer
First Name: Jensen **Last Name:** Chiu **Credentials (MD, MPH, etc.):** MHA
Email: jensen.chiu@acc.org **Telephone:** 202-375-6285 ext:

Co.6 **List any additional organizations that sponsored/participated in measure development:**

ADDITIONAL INFORMATION

Ad.1 **Workgroup/Expert Panel involved in measure development**
Provide a list of workgroup/panel member names and organizations. Describe the group's role in measure development.
The workgroup selected all measures, developed the measure specifications and the text in the accompanying article.
Randal J. Thomas, MD, MS, FAHA, FACP, Chair (AACVPR), Marjorie King, MD, FACC, FAACVPR(AACVPR),Karen Lui, RN, C, MS, FAACVPR (AACVPR), Neil Oldridge, PhD, FAACVPR (AACVPR),Ileana L. Piña, MD, FACC (ACCF/AHA Task Force on Performance Measures), John Spertus, MD, MPH, FACC (ACCF/AHA Task Force on Performance Measures

Ad.2 **If adapted, name of original measure:** Cardiac Rehabilitation/Secondary Prevention (CR) Program Measurement Set to Assure Individualized Assessment and Evaluation of Modifiable Cardiovascular Risk Factors, Development of Individualized Interventions, and Communication With Other Health Care Providers.

Ad.3 If adapted, original specifications ☐ attachment or Ad.4 web page URL: 0
Measure Developer/Steward Updates and Ongoing Maintenance **Ad.6** Year the measure was first released: 2007 **Ad.7** Month and Year of most recent revision: 09 2007 **Ad.8** What is the frequency for review/update of this measure? Review annually for relevance and currency/update as needed based on new evidence or feedback from implementation. **Ad.9** When is the next scheduled review/update for this measure? 09 2011
Ad.10 Copyright statement/disclaimers: This document was approved by the American Association of Cardiovascular and Pulmonary Rehabilitation Board of Directors in May 2007, the American College of Cardiology Foundation Board of Trustees in April 2007 and by the American Heart Association Science Advisory and Coordinating Committee in April 2007. When citing this document, the American College of Cardiology Foundation would appreciate the following citation format: Thomas RJ, King M, Lui K, Oldridge N, Piña IL, Spertus J. AACVPR/ACC/AHA 2007 performance measures on cardiac rehabilitation for referral to and delivery of cardiac rehabilitation/secondary prevention services. J Am Coll Cardiol 2007;50:1400–33. This article has been co-published in the October 2, 2007, issue of Circulation and the September/October issue of the Journal of Cardiopulmonary Rehabilitation and Prevention. Copies: This document is available on the World Wide Web sites of the American Association of Cardiovascular and Pulmonary Rehabilitation (www.aacvpr.org), American College of Cardiology (www.acc.org), and American Heart Association (my.americanheart.org). For copies of this document, please contact Elsevier Inc. Reprint Department, fax (212) 633-3820, e-mail reprints@elsevier.com Permissions: Modification, alteration, enhancement and/or distribution of this document are not permitted without the express permission of the American Association of Cardiovascular and Pulmonary Rehabilitation, American College of Cardiology, or American Heart Association. Please contact Elsevier's permission department at healthpermissions@elsevier.com.
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I have checked that the submission is complete and all the information needed to evaluate the measure is provided in the form; any blank fields indicate that no information is provided. ☒
Date of Submission (*MM/DD/YY*)**:** 10/27/10