



Measure Information

This document contains the information submitted by measure developers/stewards, but is organized according to NQF's measure evaluation criteria and process. The item numbers refer to those in the submission form but may be in a slightly different order here. In general, the item numbers also reference the related criteria (e.g., item 1b.1 relates to sub criterion 1b).

Brief Measure Information

NQF #: 0642

Corresponding Measures:

De.2. Measure Title: Cardiac Rehabilitation Patient Referral From an Inpatient Setting

Co.1.1. Measure Steward: American College of Cardiology

De.3. Brief Description of Measure: Percentage of patients admitted to a hospital with a primary diagnosis of an acute myocardial infarction or chronic stable angina or who during hospitalization have undergone coronary artery bypass (CABG) surgery, a percutaneous coronary intervention (PCI), cardiac valve surgery (CVS), or cardiac transplantation who are referred to an early outpatient cardiac rehabilitation/secondary prevention program.

1b.1. Developer Rationale: 1. Cardiac rehabilitation/secondary prevention programs (CR/SP) improve patient outcomes, including quality of life, function, recurrent myocardial infarction, and mortality.

2. CR/SP is underutilized with geographic variability and decreased participation by patients with economic disadvantages, women and older patients.

3. The CR/SP performance measures were developed for use in systematic quality improvement projects to close this treatment gap.

4. Use of systematic referral processes and tools have been shown to increase CR/SP referral.

5. Enrollment and participation in CR/SP, not referral, have been shown to improve patient outcomes. However, referral is necessary for patients to enroll and participate in CR/SP. The strength of provider referral to CR has been shown to correlate with participation in CR.

6. Therefore, the specific CR/SP referral measures being submitted should be endorsed by NQF for use for quality improvement and in publicly reported systems.

S.4. Numerator Statement: Number of eligible patients with a qualifying event/diagnosis who have been referred to an outpatient Cardiac Rehabilitation/Secondary Prevention (CR/SP) program prior to hospital discharge or have a documented medical or system reason why such a referral was not made.

(Note: The program may include a traditional CR/SP program based on face-to-face interactions and training sessions or may include other options such as home-based approaches. If alternative CR/SP approaches are used, they should be designed to meet appropriate safety standards and deliver effective, evidence-based services.)

S.6. Denominator Statement: Number of hospitalized patients in the reporting period hospitalized with a qualifying cardiovascular disease event/diagnosis who do not meet any of the criteria listed in the denominator exclusion section below.

S.8. Denominator Exclusions: Exceptions criteria require documentation of one or more of the following factors that may prohibit cardiac rehabilitation participation:

-Medical factors (e.g., patient deemed by provider to have a medically unstable, life-threatening condition).

-Health care system factors (e.g., no cardiac rehabilitation/secondary prevention (CR/SP) program available within 60 min of travel time from the patient's home).

The only exclusion criterion for this measure is noted below:

-Patients who expired before discharge.

De.1. Measure Type: Process

S.17. Data Source: [Electronic Health Records, Paper Medical Records, Registry Data](#)

S.20. Level of Analysis: [Clinician : Group/Practice, Clinician : Individual, Facility](#)

IF Endorsement Maintenance – Original Endorsement Date: [May 05, 2010](#) **Most Recent Endorsement Date:** [Sep 08, 2014](#)

IF this measure is included in a composite, NQF Composite#/title:

IF this measure is paired/grouped, NQF#/title:

De.4. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results? [This is not a paired measure.](#)

1. Evidence, Performance Gap, Priority – Importance to Measure and Report

Extent to which the specific measure focus is evidence-based, important to making significant gains in healthcare quality, and improving health outcomes for a specific high-priority (high-impact) aspect of healthcare where there is variation in or overall less-than-optimal performance. ***Measures must be judged to meet all sub criteria to pass this criterion and be evaluated against the remaining criteria.***

1a. Evidence to Support the Measure Focus – See attached Evidence Submission Form

[0642_NQF_evidence_attachment_Sep2017_v2-636465235314280477.docx](#)

1a.1 For Maintenance of Endorsement: Is there new evidence about the measure since the last update/submission?

Do not remove any existing information. If there have been any changes to evidence, the Committee will consider the new evidence. Please use the most current version of the evidence attachment (v7.1). Please use red font to indicate updated evidence.

[Yes](#)

1b. Performance Gap

Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating:

- considerable variation, or overall less-than-optimal performance, in the quality of care across providers; and/or
- Disparities in care across population groups.

1b.1. Briefly explain the rationale for this measure (e.g., how the measure will improve the quality of care, the benefits or improvements in quality envisioned by use of this measure)

If a COMPOSITE (e.g., combination of component measure scores, all-or-none, any-or-none), SKIP this question and answer the composite questions.

1. Cardiac rehabilitation/secondary prevention programs (CR/SP) improve patient outcomes, including quality of life, function, recurrent myocardial infarction, and mortality.
2. CR/SP is underutilized with geographic variability and decreased participation by patients with economic disadvantages, women and older patients.
3. The CR/SP performance measures were developed for use in systematic quality improvement projects to close this treatment gap.
4. Use of systematic referral processes and tools have been shown to increase CR/SP referral.
5. Enrollment and participation in CR/SP, not referral, have been shown to improve patient outcomes. However, referral is necessary for patients to enroll and participate in CR/SP. The strength of provider referral to CR has been shown to correlate with participation in CR.
6. Therefore, the specific CR/SP referral measures being submitted should be endorsed by NQF for use for quality improvement and in publicly reported systems.

1b.2. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis. *(This is required for maintenance of endorsement. Include mean, std dev, min, max, interquartile range, scores by decile. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities include.) This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.*
[See attachment in Appendix \(A1\).](#)

1b.3. If no or limited performance data on the measure as specified is reported in 1b2, then provide a summary of data from the literature that indicates opportunity for improvement or overall less than optimal performance on the specific focus of measurement.

1. Thomas RJ, Miller NH, Lamendola C, Berra K, Hedbäck B, Durstine JL, Haskell W. National Survey on Gender Differences in Cardiac Rehabilitation Programs. Patient characteristics and enrollment patterns. J Cardiopulm Rehabil. 1996 Nov-Dec;16(6):402-12.
2. Centers for Disease Control and Prevention (CDC). Receipt of outpatient cardiac rehabilitation among heart attack survivors--United States, 2005. MMWR Morb Mortal Wkly Rep. 2008 Feb 1;57(4):89-94.
3. Suaya J, Shepard DS, Normand SL, Ades PA, Prottas J, Stason WB. Use of cardiac rehabilitation by Medicare beneficiaries after myocardial infarction or coronary bypass surgery. Circulation. 2007 Oct 9;116(15):1653-62.
4. Curnier DY, Savage PD, Ades PA. Geographic distribution of cardiac rehabilitation programs in the United States. J Cardiopulm Rehabil. 2005 Mar-Apr;25(2):80-4.
5. Grace SL, Gravely-Witte S, Brual J, Monette G, Suskin N, Higginson L, Alter DA, Stewart DE. Contribution of patient and physician factors to cardiac rehabilitation enrollment: a prospective multilevel study. Eur J Cardiovasc Prev Rehabil. 2008 Oct;15(5):548-56

1b.4. Provide disparities data from the measure as specified (current and over time) by population group, e.g., by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability. (This is required for maintenance of endorsement. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included.) For measures that show high levels of performance, i.e., "topped out", disparities data may demonstrate an opportunity for improvement/gap in care for certain sub-populations. This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.

Geographic area: The CathPCI and ACTION Registry-GWTG collect hospital data from the United States as well as territories. The United States data are included in the aggregate. Other country data are excluded from national aggregates for the purpose of reporting.

Number of accountable entities: CathPCI: 1284 for calendar year 2011; 1360 for calendar year 2012:

Number of accountable entities: ACTION Registry-GWTG: 551 for calendar year 2011; 703 for calendar year 2012

Patients included: CathPCI: 223037 for calendar years 2011-2012;

Patients included: CathPCI: 1,239,643 for calendar years 2011-2012

Disparities by Gender 2012 (ACTIONRegistry-GWTG)

Total	male	P-Value
n = 122285	Male	
n = 81201	Female	
n = 41084		
CR		
Cardiac Rehab Referral	92362 (75.5%)	62725 (77.2%) 29637 (72.1%) < 0.001

Continuous variables compared using Student's T-test.
Categorical variables compared using chi-square or Fisher's exact test.

Disparities by Race 2012 (ACTIONRegistry-GWTG)

Total	racecat	P-Value
n = 122285	1 Caucasian	
n = 103641	2 Af Am	
n = 14329	3 Other	
n = 4315		
CR		
Cardiac Rehab Referral	92362 (75.5%) 79246 (76.5%) 10308 (71.9%) 2808 (65.1%)	< 0.001

Continuous variables compared using one-way analysis of variance.
Categorical variables compared using chi-square or Fisher's exact test.

Disparities by Insurance 2012 (ACTIONRegistry-GWTG)

Total	inscat	P-Value
n = 122285	1 Private	
n = 70170	2 Medicare	

n = 28803 3 Medicaid

n = 52734 Other

n = 29495 None

n = 15090

CR

Cardiac Rehab Referral	92362 (75.5%)	54457 (77.6%)	20205 (70.1%)	3713 (70.4%)	2192 (74.3%)	11795 (78.2%)
< 0.001						

Continuous variables compared using one-way analysis of variance.

Categorical variables compared using chi-square or Fisher's exact test.

Disparities by Hospital Teaching status 2012 (ACTIONRegistry-GWTG)

Total	IsTeaching	P-Value
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n = 122285	Teaching Hosp	
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n = 56023	Non-Teaching Hosp
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n = 66262

CR

Cardiac Rehab Referral	92362 (75.5%)	44626 (79.7%)	47736 (72.0%)	< 0.001
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Continuous variables compared using Student's T-test.

Categorical variables compared using chi-square or Fisher's exact test.

Disparities by Hospital Community2012(ACTIONRegistry-GWTG)

Total	CommunityDesc	P-Value
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n = 122285	Rural
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n = 17667	Suburban
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n = 36800	Urban
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n = 67818

CR

Cardiac Rehab Referral	92362 (75.5%)	13524 (76.5%)	27467 (74.6%)	51371 (75.7%)	< 0.001
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Continuous variables compared using one-way analysis of variance.

Categorical variables compared using chi-square or Fisher's exact test.

Disparities by Gender 2012 (CathPCI)

Total	Sex	P-Value
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n = 623098	Male
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n = 424459	Female
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n = 198639

C Rehab

Cardiac Rehabilitation Referral	383112 (61.49%)	261946 (61.71%)	121166 (61.00%)	< 0.001
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Continuous variables compared using Student's T-test.

Categorical variables compared using chi-square or Fisher's exact test.

Disparities by Race 2012 (CathPCI)

Total	racecat	P-Value
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n = 623098	1 Caucasian
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n = 542871	2 Af Am
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n = 52261	3 Other
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n = 27966

C Rehab

Cardiac Rehabilitation Referral	383112 (61.49%)	340224 (62.67%)	29994 (57.39%)	12894 (46.11%)	< 0.001
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Continuous variables compared using one-way analysis of variance.

Categorical variables compared using chi-square or Fisher's exact test.

Disparities by Insurance 2012 (CathPCI)

Total	inscat	P-Value
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n = 623098	1 Private
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n = 399887 2 Medicare
 n = 140623 3 Medicaid
 n = 23515 4 Other
 n = 14177 5 None
 n = 44896

C Rehab

Cardiac Rehabilitation Referral 383112 (61.49%) 249706 (62.44%) 82008 (58.32%) 13741 (58.44%) 8689 (61.29%) 28968 (64.52%) < 0.001

Continuous variables compared using one-way analysis of variance.

Categorical variables compared using chi-square or Fisher's exact test.

Disparities by Hospital Teaching status 2012 (CathPCI)

Total	Teaching Hospital	P-Value
n = 623098	1	
n = 310334	0	
n = 312764		

C Rehab

Cardiac Rehabilitation Referral 383112 (61.49%) 191840 (61.82%) 191272 (61.16%) < 0.001

Continuous variables compared using Student's T-test.

Categorical variables compared using chi-square or Fisher's exact test.

Disparities by Hospital Community 2012 (CathPCI)

Total	Hospital Location	P-Value
n = 623098	RURAL	
n = 81090	SUBURBAN	
n = 190630	URBAN	
n = 351378		

C Rehab

Cardiac Rehabilitation Referral 383112 (61.49%) 51938 (64.05%) 118013 (61.91%) 213161 (60.66%) < 0.001

Continuous variables compared using one-way analysis of variance.

Categorical variables compared using chi-square or Fisher's exact test.

1b.5. If no or limited data on disparities from the measure as specified is reported in 1b.4, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement. Include citations. Not necessary if performance data provided in 1b.4

1. Thomas RJ, Miller NH, Lamendola C, Berra K, Hedbäck B, Durstine JL, Haskell W. National Survey on Gender Differences in Cardiac Rehabilitation Programs. Patient characteristics and enrollment patterns. J Cardiopulm Rehabil. 1996 Nov-Dec;16(6):402-12.
2. Suaya JA, Shepard DS, Normand ST, Ades PA, Protas J, Stason WB. Use of cardiac rehabilitation by Medicare beneficiaries after myocardial infarction or coronary bypass surgery. Circulation 2007;116:1653-1662.
3. Weingarten MN, Salz KA, Thomas RJ, Squires RW. Rates of enrollment for Men and Women Referred to Outpatient Cardiac Rehabilitation. J Cardiopulm Rehabil Prev. 2011 July/August;31(4):217-22.
4. Review article: Valencia HE, Savage PD, Ades PA. Cardiac rehabilitation participation in underserved populations. J Cardiopulm Rehabil Prev. 2011;31:203-210.
5. Beswick AD, Rees K, Griebisch I, Taylor FC, Burke M, West RR, Victory J, Brown J, Taylor RS, Ebrahim S. Provision, uptake and cost of cardiac rehabilitation programmes: improving services to under-represented groups. Health Technol Assess. 2004 Oct;8(41):iii-iv, ix-x, 1-152.

2. Reliability and Validity—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. **Measures must be judged to meet the sub criteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.**

2a.1. Specifications The measure is well defined and precisely specified so it can be implemented consistently within and across

organizations and allows for comparability. eMeasures should be specified in the Health Quality Measures Format (HQMF) and the Quality Data Model (QDM).

De.5. Subject/Topic Area (check all the areas that apply):

Cardiovascular, Cardiovascular : Coronary Artery Disease, Cardiovascular : Coronary Artery Disease (AMI), Cardiovascular : Coronary Artery Disease (PCI), Surgery : Cardiac Surgery

De.6. Non-Condition Specific(check all the areas that apply):

Primary Prevention

De.7. Target Population Category (Check all the populations for which the measure is specified and tested if any):

Elderly, Populations at Risk, Populations at Risk : Individuals with multiple chronic conditions

S.1. Measure-specific Web Page (Provide a URL link to a web page specific for this measure that contains current detailed specifications including code lists, risk model details, and supplemental materials. Do not enter a URL linking to a home page or to general information.)

<http://content.onlinejacc.org/article.aspx?articleid=1138518>

S.2a. If this is an eMeasure, HQMF specifications must be attached. Attach the zipped output from the eMeasure authoring tool (MAT) - if the MAT was not used, contact staff. (Use the specification fields in this online form for the plain-language description of the specifications)

This is not an eMeasure Attachment:

S.2b. Data Dictionary, Code Table, or Value Sets (and risk model codes and coefficients when applicable) must be attached. (Excel or csv file in the suggested format preferred - if not, contact staff)

Attachment Attachment: [action_v2_codersdictionary_2-4-2--rebranded-__AND_cathpci_v4_codersdictionary_4-4.pdf](#)

S.2c. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

No, this is not an instrument-based measure Attachment:

S.2d. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

S.3.1. For maintenance of endorsement: Are there changes to the specifications since the last updates/submission. If yes, update the specifications for S1-2 and S4-22 and explain reasons for the changes in S3.2.

No

S.3.2. For maintenance of endorsement, please briefly describe any important changes to the measure specifications since last measure update and explain the reasons.

There have been no changes since our submission in 2012.

S.4. Numerator Statement (Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome) DO NOT include the rationale for the measure.

IF an OUTCOME MEASURE, state the outcome being measured. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

Number of eligible patients with a qualifying event/diagnosis who have been referred to an outpatient Cardiac Rehabilitation/Secondary Prevention (CR/SP) program prior to hospital discharge or have a documented medical or system reason why such a referral was not made.

(Note: The program may include a traditional CR/SP program based on face-to-face interactions and training sessions or may include other options such as home-based approaches. If alternative CR/SP approaches are used, they should be designed to meet appropriate safety standards and deliver effective, evidence-based services.)

S.5. Numerator Details *(All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)*

IF an OUTCOME MEASURE, describe how the observed outcome is identified/counted. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

Qualifying events include all patients hospitalized with primary diagnosis of myocardial infarction (MI), chronic stable angina, or who during hospitalization have undergone coronary artery bypass graft surgery (CABG), percutaneous coronary intervention (PCI), cardiac valve surgery, and/or heart transplantation.

A referral is defined as an official communication between the healthcare provider and the patient to recommend and carry out a referral order to an early outpatient cardiac rehabilitation program. This includes the provision of all necessary information to the patient that will allow the patient to enroll in an early outpatient cardiac rehabilitation program. This also includes a communication between the healthcare provider or healthcare system and the cardiac rehabilitation program that includes the patient's enrollment information for the program. A hospital discharge summary or office note may be potentially formatted to include the necessary patient information to communicate to the cardiac rehabilitation program [the patient's cardiovascular history, testing, and treatments, for instance.] All communications must maintain appropriate confidentiality as outlined by the 1996 Health Insurance Portability and Accountability Act (HIPAA).

S.6. Denominator Statement *(Brief, narrative description of the target population being measured)*

Number of hospitalized patients in the reporting period hospitalized with a qualifying cardiovascular disease event/diagnosis who do not meet any of the criteria listed in the denominator exclusion section below.

S.7. Denominator Details *(All information required to identify and calculate the target population/denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)*

IF an OUTCOME MEASURE, describe how the target population is identified. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

Patients with a qualifying event who are to be discharged for a short-term stay in an inpatient medical rehabilitation facility are still expected to be referred to an outpatient cardiac rehabilitation program by the inpatient team during the index hospitalization. This referral should be reinforced by the care team at the medical rehabilitation facility.

S.8. Denominator Exclusions *(Brief narrative description of exclusions from the target population)*

Exceptions criteria require documentation of one or more of the following factors that may prohibit cardiac rehabilitation participation:

- Medical factors (e.g., patient deemed by provider to have a medically unstable, life-threatening condition).
- Health care system factors (e.g., no cardiac rehabilitation/secondary prevention (CR/SP) program available within 60 min of travel time from the patient's home).

The only exclusion criterion for this measure is noted below:

- Patients who expired before discharge.

S.9. Denominator Exclusion Details *(All information required to identify and calculate exclusions from the denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)*

Exclusion:

There is only one exclusion criteria (patients who expired before discharge). This information is readily available within the medical record.

Exceptions:

All eligible patients who can participate in even a low intensity exercise program and who have the cognitive ability to carry out the individualized education and counseling to life-long secondary prevention efforts should be referred to cardiac

rehabilitation/secondary prevention programs, because morbidity and mortality benefits extend to nearly all patient populations, regardless of age or co-morbidities. As a result, the exception examples included in the performance measure relate to either the patient's inability to attend an exercise program (due to physical or practical obstacles) or to cognitive deficits which make them unable to actively participate in exercise or to apply secondary prevention recommendations.

Examples, justification, and data collection issues for exceptions for this measure;

1. Medical factors (e.g., patient deemed by provider to have a medically unstable, life-threatening condition): Medically unstable, life-threatening conditions are contraindications to aerobic exercise and require medical efforts to stabilize and reverse those conditions, rather than efforts directed at secondary prevention of cardiovascular disease. Objective criteria for contraindications to exercise training are included in AHA, ACC, and AACVPR statements and guidelines, which are readily available to practicing clinicians and abstractors. After the condition has been stabilized or reversed, then referral to CR/SP is appropriate. Providers document the specific reason for this exception in clinical notes, summaries and problem lists, which can be abstracted.

2. Health care system factors (e.g., no cardiac rehabilitation program available within 60 minutes of travel time from the patient's home): Although some patients may do so, it is not practical to expect a patient to drive for 2 hours 2 or 3 times per week in order to attend a program that lasts for 1 to 2 hours and research has shown that distance to CR/SP is inversely correlated with attendance. We chose 60 minutes (assuming average 30 mph driving speed) based on published data showing that the adjusted odds ratio (OR) to attend CR/SP decreased as the distance from patient zip code to nearest CR/SP facility increased, with the greatest decline between 10.2 (6.5-14.9) miles (OR 0.58) to 31.8 (15.0-231.0) miles (OR 0.29). Although alternative delivery models such as those using telemedicine or home care may be developed in future to provide CR/SP, currently there is no reimbursement for these programs. Therefore, it is unreasonable to hold the provider responsible to refer a patient to a program that he/she is highly unlikely to attend. Providers can determine availability of CR/SP programs from on-line or local resources and document this exception in the medical record. Abstractors can verify the exceptions by cross-referencing the patient's address with publicly available lists of CR/SP program locations.

Exclusion:
There is only one exclusion criteria (patients who expired before discharge). This information is readily available within the medical record.

Exceptions:

All eligible patients who can participate in even a low intensity exercise program and who have the cognitive ability to carry out the individualized education and counseling to life-long secondary prevention efforts should be referred to cardiac rehabilitation/secondary prevention programs, because morbidity and mortality benefits extend to nearly all patient populations, regardless of age or co-morbidities. As a result, the exception examples included in the performance measure relate to either the patient's inability to attend an exercise program (due to physical or practical obstacles) or to cognitive deficits which make them unable to actively participate in exercise or to apply secondary prevention recommendations.

Examples, justification, and data collection issues for exceptions for this measure;

1. Medical factors (e.g., patient deemed by provider to have a medically unstable, life-threatening condition): Medically unstable, life-threatening conditions are contraindications to aerobic exercise and require medical efforts to stabilize and reverse those conditions, rather than efforts directed at secondary prevention of cardiovascular disease. Objective criteria for contraindications to exercise training are included in AHA, ACC, and AACVPR statements and guidelines, which are readily available to practicing clinicians and abstractors. After the condition has been stabilized or reversed, then referral to CR/SP is appropriate. Providers document the specific reason for this exception in clinical notes, summaries and problem lists, which can be abstracted.

2. Health care system factors (e.g., no cardiac rehabilitation program available within 60 minutes of travel time from the patient's home): Although some patients may do so, it is not practical to expect a patient to drive for 2 hours 2 or 3 times per week in order to attend a program that lasts for 1 to 2 hours and research has shown that distance to CR/SP is inversely correlated with attendance. We chose 60 minutes (assuming average 30 mph driving speed) based on published data showing that the adjusted odds ratio (OR) to attend CR/SP decreased as the distance from patient zip code to nearest CR/SP facility increased, with the greatest decline between 10.2 (6.5-14.9) miles (OR 0.58) to 31.8 (15.0-231.0) miles (OR 0.29). Although alternative delivery models such as those using telemedicine or home care may be developed in future to provide CR/SP, currently there is no reimbursement for these programs. Therefore, it is unreasonable to hold the provider responsible to refer a patient to a program that he/she is highly unlikely to attend. Providers can determine availability of CR/SP programs from on-line or local resources and document this exception in the medical record. Abstractors can verify the exceptions by cross-referencing the patient's address with publicly

available lists of CR/SP program locations.

S.10. Stratification Information *(Provide all information required to stratify the measure results, if necessary, including the stratification variables, definitions, specific data collection items/responses, code/value sets, and the risk-model covariates and coefficients for the clinically-adjusted version of the measure when appropriate – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format with at S.2b.)*

Measure was not stratified. Since all patient sub-groups are reported to have low referral rates and low utilization rates for cardiac rehabilitation services, there is no specific requirement to report data on this performance measure in a stratified format. However, medical centers are encouraged to utilize any stratification of their data as they use the performance measure to identify suboptimal processes and also subgroups at particular risk that are under their care. Such stratification could include stratification by gender, ethnicity, and/or age, since these variables have been found to identify subpopulations that are at particular risk for non-referral to CR/SP in some cities and regions.

S.11. Risk Adjustment Type (Select type. Provide specifications for risk stratification in measure testing attachment)

No risk adjustment or risk stratification

If other:

S.12. Type of score:

Rate/proportion

If other:

S.13. 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)*

Better quality = Higher score

S.14. Calculation Algorithm/Measure Logic *(Diagram or describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; time period for data, aggregating data; risk adjustment; etc.)*

ACC CathPCI Registry calculation:

US HOSP= YES

Discharge date= present

Discharge location=present

Discharge referral= present

Discharge status= present

Exclude any of the below:

-Death

-PCI <= 0

-"NULL" values

ACTION GWTG Registry calculation:

US HOSP= YES

Discharge date= present

Discharge location=present

Discharge referral= present

Discharge status= present

Exclude any of the below:

-Death

-Comfort measure= present

-"NULL" values

AACVPR/ACC/AHA Cardiac Rehabilitation Referral Reliability Testing (CR3) Project:

Hospital ID present = YES

AND

Subject ID = YES

AND

*Provider NPI = YES

AND
Age at start of measurement period is 18 years or older = YES

AND
Qualifying Event: Myocardial Infarction = YES
OR
Qualifying Event: Coronary Artery Bypass Graft = YES

OR
Qualifying Event: Cardiac Valve Surgery = YES
OR
Qualifying Event: Heart Transplantation = YES

OR
Qualifying Event: Stable Angina = YES
OR
Qualifying Event: PCI-stent = YES

OR
Qualifying Event: PCI- other intervention = YES

AND
Yes, documentation that patient was referred to CR for this event/diagnosis

*Since the data for the CR3 Project were processed through the NCDR-PINNACLE Center, NPI was used to help process the data in accordance with the software used at the Center, which requires an NPI on each report. However, since the purpose of the CR3 Project was to assess reliability of the chart abstraction process and not to assess the variability of CR/SP referral by providers, we opted to analyze the CR/SP referral rates by site, and to use the site NPI for data processing purposes only.

S.15. Sampling (If measure is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.)

IF an instrument-based performance measure (e.g., PRO-PM), identify whether (and how) proxy responses are allowed.
This performance measure is not based on a sample.

S.16. Survey/Patient-reported data (If measure is based on a survey or instrument, provide instructions for data collection and guidance on minimum response rate.)

Specify calculation of response rates to be reported with performance measure results.
Measure is not based on a survey.

S.17. Data Source (Check ONLY the sources for which the measure is SPECIFIED AND TESTED).

If other, please describe in S.18.

Electronic Health Records, Paper Medical Records, Registry Data

S.18. Data Source or Collection Instrument (Identify the specific data source/data collection instrument (e.g. name of database, clinical registry, collection instrument, etc., and describe how data are collected.)

IF instrument-based, identify the specific instrument(s) and standard methods, modes, and languages of administration.
American College of Cardiology PINNACLE registry and AACVPR/ACC/AHA Cardiac Rehabilitation Testing (CR3) Project.

S.19. Data Source or Collection Instrument (available at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)

Available in attached appendix at A.1

S.20. Level of Analysis (Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED)

Clinician : Group/Practice, Clinician : Individual, Facility

S.21. Care Setting (Check ONLY the settings for which the measure is SPECIFIED AND TESTED)

Inpatient/Hospital

If other:

S.22. COMPOSITE Performance Measure - Additional Specifications (Use this section as needed for aggregation and weighting rules, or calculation of individual performance measures if not individually endorsed.)

N/A

2. Validity – See attached Measure Testing Submission Form

[NQF_testing_attachment_Sep2017_0642-636469499149962567.docx](#)

2.1 For maintenance of endorsement

Reliability testing: If testing of reliability of the measure score was not presented in prior submission(s), has reliability testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.

No

2.2 For maintenance of endorsement

Has additional empirical validity testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.

No

2.3 For maintenance of endorsement

Risk adjustment: For outcome, resource use, cost, and some process measures, risk-adjustment that includes social risk factors is not prohibited at present. Please update sections 1.8, 2a2, 2b1, 2b4.3 and 2b5 in the Testing attachment and S.140 and S.11 in the online submission form. NOTE: These sections must be updated even if social risk factors are not included in the risk-adjustment strategy. You MUST use the most current version of the Testing Attachment (v7.1) -- older versions of the form will not have all required questions.

No - This measure is not risk-adjusted

3. Feasibility

Extent to which the specifications including measure logic, require data that are readily available or could be captured without undue burden and can be implemented for performance measurement.

3a. Byproduct of Care Processes

For clinical measures, the required data elements are routinely generated and used during care delivery (e.g., blood pressure, lab test, diagnosis, medication order).

3a.1. Data Elements Generated as Byproduct of Care Processes.

[Abstracted from a record by someone other than person obtaining original information \(e.g., chart abstraction for quality measure or registry\)](#)

If other:

3b. Electronic Sources

The required data elements are available in electronic health records or other electronic sources. If the required data are not in electronic health records or existing electronic sources, a credible, near-term path to electronic collection is specified.

3b.1. To what extent are the specified data elements available electronically in defined fields (i.e., data elements that are needed to compute the performance measure score are in defined, computer-readable fields) Update this field for **maintenance of endorsement**.

[ALL data elements are in defined fields in electronic clinical data \(e.g., clinical registry, nursing home MDS, home health OASIS\)](#)

3b.2. If ALL the data elements needed to compute the performance measure score are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources. For **maintenance of endorsement,** if this measure is not an eMeasure (eCQM), please describe any efforts to develop an eMeasure (eCQM).

3b.3. If this is an eMeasure, provide a summary of the feasibility assessment in an attached file or make available at a measure-specific URL. Please also complete and attach the NQF Feasibility Score Card.

Attachment:**3c. Data Collection Strategy**

Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, costs associated with fees/licensing of proprietary measures) can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use). For eMeasures, a feasibility assessment addresses the data elements and measure logic and demonstrates the eMeasure can be implemented or feasibility concerns can be adequately addressed.

3c.1. Required for maintenance of endorsement. Describe difficulties (as a result of testing and/or operational use of the measure) regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.

IF instrument-based, consider implications for both individuals providing data (patients, service recipients, respondents) and those whose performance is being measured.

ACC CathPCI Registry:

Referral to CR/SP following percutaneous intervention is low, compared to other performance measures, as documented by the ACC CathPCI Registry. The work group recognizes that this is due to several factors, some of which can be modified with education and improved processes. Many cardiologists remain confused about insurance coverage for CR/SP following percutaneous intervention, because Medicare did not cover these services until after legislative changes in 2006. AACVPR has been working with the Society for Cardiovascular Angiography and Intervention (SCAI) and ACC to provide educational materials for cardiologists and their patients about the benefits of CR/SP. These include fact sheets for patients with a space to insert specific program contact information, both in English and Spanish, and enhanced on-line educational materials.

ACTION Registry:

Based on our observation that inter-rater reliability testing with this registry was not as strong as compared to the CR3 project, we suspect that additional education related to implementation of the CR/SP referral measures is needed. The measure testing workgroup plans to work with AACVPR, ACC, and AHA leadership to develop implementation notes to instruct abstractors and providers about the documentation details needed to meet the 3 components of CR/SP referral criteria.

3c.2. Describe any fees, licensing, or other requirements to use any aspect of the measure as specified (e.g., value/code set, risk model, programming code, algorithm).

The ACCF's program the National Cardiovascular Data Registry (NCDR) provides evidence based solutions for cardiologists and other medical professionals committed to excellence in cardiovascular care. NCDR hospital participants receive confidential benchmark reports that include access to measure macro specifications and micro specifications, the eligible patient population, exclusions, and model variables (when applicable). In addition to hospital sites, NCDR Analytic and Reporting Services provides consenting hospitals' aggregated data reports to interested federal and state regulatory agencies, multi-system provider groups, third-party payers, and other organizations that have an identified quality improvement initiative that supports NCDR-participating facilities. Lastly, the ACCF also allows for licensing of the measure specifications outside of the Registry. For calendar year 2014 the annual pricing for hospitals, NCDR Analytic and Reporting Services, and licensing of measure specifications ranges from \$995-\$15,000.

Measures that are aggregated by ACCF and submitted to NQF are intended for public reporting and therefore there is no charge for a standard export package. However, on a case by case basis, requests for modifications to the standard export package will be available for a separate charge.

4. Usability and Use

Extent to which potential audiences (e.g., consumers, purchasers, providers, policy makers) are using or could use performance results for both accountability and performance improvement to achieve the goal of high-quality, efficient healthcare for individuals or populations.

4a. Accountability and Transparency

Performance results are used in at least one accountability application within three years after initial endorsement and are publicly reported within six years after initial endorsement (or the data on performance results are available). If not in use at the time of initial endorsement, then a credible plan for implementation within the specified timeframes is provided.

4.1. Current and Planned Use

NQF-endorsed measures are expected to be used in at least one accountability application within 3 years and publicly reported within 6 years of initial endorsement in addition to performance improvement.

Specific Plan for Use	Current Use (for current use provide URL)

4a1.1 For each CURRENT use, checked above (update for maintenance of endorsement), provide:

- Name of program and sponsor
- Purpose
- Geographic area and number and percentage of accountable entities and patients included
- Level of measurement and setting

NCDR CathPCI Registry:

The CathPCI Registry is sponsored by ACC in conjunction with the Society for Cardiovascular Angiography and Interventions. The CathPCI Registry was designed to create a national surveillance system to assess the characteristics, treatments, and outcomes of patients with coronary heart disease who undergo procedures in cardiac catheterization laboratories. Eligible patients are adults (18 years of age and older) who undergo a diagnostic cardiac catheterization and/or PCI. More than 1,300 hospitals across the U.S. submit data to the CathPCI registry. Participation in the CathPCI Registry provides risk-adjusted quarterly benchmark reports that compares an institution's performance with that of volume-based peer groups and the national experience. The registry includes standardized, evidence-based data elements and definitions, a Dashboard tool that provides a custom query to control for variables (facility size, number of procedures, teaching vs. non-teaching sites, states and regions) to compare the participating facility data, metrics and volumes. ABIM Diplomates can also meet MOC recertification requirements by using CathPCI Registry data to earn up to 80 points toward evaluation of practice performance through the Clinical Quality Coach mobile app.

The NCDR ACTION Registry

The ACTION (Acute Coronary Treatment and Intervention Outcomes Network Registry) is sponsored by the ACCF, with partnering support from The American College of Emergency Physicians and The Society of Hospital Medicine. The ACTION Registry was designed to assess the characteristics, treatments, and outcomes of acute myocardial infarction (AMI) patients (either ST-segment elevation myocardial infarction or non-ST-segment elevation myocardial infarction). Eligible patients are those older than 18 years of age hospitalized with a diagnosis of AMI who have acute ischemic symptoms within 24 h of presentation. Patients admitted for other conditions who subsequently develop AMI during hospital stay are not included. More than 900 hospital across the U.S. submit data to ACTION Registry.

ACTION Registry Achievement Award:

For the demonstration of achievement by sustaining performance measures in the treatment of acute myocardial infarction patients through the implementation of ACTION Registry® and in-hospital initiation of the American College of Cardiology/American Heart Association Clinical Guideline recommendations.

ACC Patient Navigator

The ACC has launched a national scale program, the Patient Navigator Program: Focus MI, to improve the care and outcomes of myocardial infarction patients and further reduce avoidable readmissions beyond 30 days. The ACC ACTION registry is a part of this program.

4a1.2. If not currently publicly reported OR used in at least one other accountability application (e.g., payment program, certification, licensing) what are the reasons? (e.g., Do policies or actions of the developer/steward or accountable entities restrict access to performance results or impede implementation?)

ACC plans on reporting this measure publicly through the CathPCI QCDR. In addition, the ACC is expanding public reporting for the ACTION registry. While the ACC has not yet finalized which measures are moving forward for public reporting, NQF-endorsed measures are highly desirable. Lastly, the ACC is also in active discussions with a private insurance payer entity. Due to non-disclosure requirements at this time, we are not able to provide specific details. We anticipate being able to provide more details by the January CV project meeting.

We are continuously seeking opportunities to advocate for expanded use of this measure in government or other programs, including those intended for accountability or public reporting. The ACC, AHA and AACVPR do not have any policies that would

restrict access to the performance measure specifications or results or that would impede implementation of the measure for any application. We would welcome its implementation in emerging applications such as accountable care organizations (ACO), Medicare Advantage insurance plans or health plans selling on the new insurance marketplace.

4a1.3. If not currently publicly reported OR used in at least one other accountability application, provide a credible plan for implementation within the expected timeframes -- any accountability application within 3 years and publicly reported within 6 years of initial endorsement. (*Credible plan includes the specific program, purpose, intended audience, and timeline for implementing the measure within the specified timeframes. A plan for accountability applications addresses mechanisms for data aggregation and reporting.*)

The ACC has also made a decision to voluntarily public report out of the ACTION registry. The data release consent release from for ACTION is available on the CV quality website: <https://cvquality.acc.org/docs/default-source/ncdr/public-reporting-documents/action-registry-public-reporting-v2>.

ACC's National Cardiovascular Data Registry (NCDR) Voluntary Hospital Public Reporting Program: The ACC currently runs a program to give hospitals the opportunity to voluntarily publicly report their measure results based on data from the National Cardiovascular Data Registry (NCDR). Hospitals that choose to participate have their results displayed on ACC's CardioSmart. Currently Hospitals can report on five measures from the CathPCI Registry and five measures from the ICD Registry. Of these publicly reporting measures, five are NQF-endorsed:

NQF # 1522: Use of a medicine in the ACEi or ARB class to improve heart function after ICD implant in patients with less than normal heart function.

NQF # 1528: Use of a beta-blocker medication after ICD implant in patients with a previous heart attack.

NQF #1529: Use of a beta-blocker medication after ICD implant in patients with less than normal heart function.

NQF #0965: Use of all recommended medications (ACEi or ARB and beta-blocker) to improve heart function and blood pressure after ICD implant.

NQF # 0964: Therapy with aspirin, P2Y12 inhibitor, and statin at discharge following PCI in eligible patients (composite measure)

Starting in 2018, participants can also elect to report on ACTION Registry metrics of which CR referral from an inpatient setting is a part of.

4a2.1.1. Describe how performance results, data, and assistance with interpretation have been provided to those being measured or other users during development or implementation.

How many and which types of measured entities and/or others were included? If only a sample of measured entities were included, describe the full population and how the sample was selected.

Performance results are distributed to all CathPCI and ACTION registry participants as part of quarterly benchmark reports, which provide a detailed analysis of an institution's individual performance in comparison to the entire registry population from participating hospitals across the nation. Reports include an executive summary dashboard, at-a-glance assessments, and patient level drill-downs. Registry participants also have access to an outcome report companion guide which provides common definitions and detailed metric specifications to assist with interpretation of performance rates.

4a2.1.2. Describe the process(es) involved, including when/how often results were provided, what data were provided, what educational/explanatory efforts were made, etc.

Results are provided as part of quarterly performance report which includes a rolling 4 quarters of data.

Participating hospitals in the CathPCI registry report the following: Patient demographics for cardiac catheterization and PCI procedures, provider and facility characteristics, history/factors, cardiac status, treat lesions; intracoronary device utilization and adverse event rates; appropriate use criteria for coronary revascularization; compliance with ACC/AHA clinical guideline recommendations.

Participating hospitals in the ACTION registry report on the following: STEMI and NSTEMI patient demographics; provider and facility characteristics; adverse event rates; AMI performance measures and select quality measures and outcomes; medication dosing errors and risk adjusted metrics; transfer facility therapies and reperfusion strategies; compliance with ACC/AHA clinical guideline recommendations.

The majority of the required data elements are routinely generated and acquired during the delivery of standard cardiac care to this patient population. Electronic extraction of data recorded as part of the procedure expedites data collection. This strategy offers point of care collection and minimizes time and cost. Institutions can manually report using a free web-based tool or automate the

reporting by using certified software developed by third-party vendors. The data elements required for this measure are readily available within the patient's medical record or can be attained without undue burden within the hospital. Most data elements exist in a structured format within patient's electronic health record.

There are a number of methods used to educate and provide general support to registry participants. This includes the following:

- Registry Site Manager Calls are available for all NCDR participants. RSM calls are provided as a source of communication between NCDR and participants to provide a live chat Q and A session on a continuous basis.
- New User Calls are available for NCDR participants, and are intended for assisting new users with their questions.
- NCDR Annual Conference

The NCDR Annual Conference is a well-attended and energetic two-day program at which participants from across the country come together to hear about new NCDR and registry-specific updates. During informative general sessions, attendees can learn about topics such as transcatheter therapies, the NCDR dashboard, risk models, data quality and validation, and value-based purchasing. Attendees also receive registry updates and participate in advanced case studies covering such topics as Appropriate Use Criteria and outcomes report interpretation.

- Release notes (for outcomes reports)
- Clinical Support

The NCDR Product Support and Clinical Quality Consultant Teams are available to assist participating sites with questions Monday through Friday, 9:00 a.m. - 5:00 p.m. ET.

4a2.2.1. Summarize the feedback on measure performance and implementation from the measured entities and others described in 4d.1.

Describe how feedback was obtained.

Feedback is typically obtained through monthly registry site manager monthly calls, ad hoc phone calls tracked with salesforce software, and during registry –specific break-out sessions at the NCDR's annual meeting. Registry Steering Committee members may also provide feedback during regularly scheduled calls.

4a2.2.2. Summarize the feedback obtained from those being measured.

Users for the CathPCI registry reported that some sites have expressed difficulty with identifying certain data elements due to how data is being currently captured. For example, communication of patient details to CR facilities is sometimes challenging to capture. However there are many facilities that seem to have very good processes in place that are integrated with their EHR/EMR.

Users from the ACTION registry reported challenges related to sites being able to implement a process at their facility to streamline compliance to the measure since it requires a multi-provider approach to complete the process. However, many sites have been able to develop quality improvement initiatives to improve their compliance. (Related Reference: Ades PA, Keteyian SJ, Wright JS, et al. Increasing Cardiac Rehabilitation Participation From 20% to 70%: A Road Map From the Million Hearts Cardiac Rehabilitation Collaborative. Mayo Clin Proc. 2017;92:234-42)

4a2.2.3. Summarize the feedback obtained from other users

No other feedback was received from other users.

4a2.3. Describe how the feedback described in 4a2.2.1 has been considered when developing or revising the measure specifications or implementation, including whether the measure was modified and why or why not.

N/A (Measure was not modified since last endorsement)

Improvement

Progress toward achieving the goal of high-quality, efficient healthcare for individuals or populations is demonstrated. If not in use for performance improvement at the time of initial endorsement, then a credible rationale describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

4b1. Refer to data provided in 1b but do not repeat here. Discuss any progress on improvement (trends in performance results, number and percentage of people receiving high-quality healthcare; Geographic area and number and percentage of accountable entities and patients included.)

If no improvement was demonstrated, what are the reasons? If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

The performance data from 2015 and 2016 for the ACTION registry shows modest improvements from 2015 to 2016. The mean performance for Q4 of 2015 is 62% and the mean performance of Q4 in 2016 is 62.7%. The IQR for the ACTION registry shows a

smaller range from 40.3% in Q4 of 2015 to 36.9% in Q4 of 2016.

The CathPCI registry is consistent with the ACTION registry in showing modest improvements from 2015 to 2016 as well. The mean performance for Q4 of 2015 is 52.8% and the mean performance of Q4 of 2016 is 53.8%. The IQR for the CathPCI registry also shows a smaller range from 74.7% in Q4 of 2015 to 67% in Q4 of 2016.

We believe that continued expanded implementation of the measure will lead to greater awareness and accountability among providers and accelerate improvements in referral (and enrollment) rates.

4b2. Unintended Consequences

The benefits of the performance measure in facilitating progress toward achieving high-quality, efficient healthcare for individuals or populations outweigh evidence of unintended negative consequences to individuals or populations (if such evidence exists).

4b2.1. Please explain any unexpected findings (positive or negative) during implementation of this measure including unintended impacts on patients.

No unintended negative consequences have been identified via our testing projects nor have any been reported to us by users of the measure.

4b2.2. Please explain any unexpected benefits from implementation of this measure.

For CathPCI: An unexpected/good outcome of this measure is that many facilities reexamined their processes to be in compliance with CR parameters and found that their process needed improvement.

For ACTION: An unexpected benefit is the improved patient compliance and commitment for other cardiac care measures which has a positive impact the long term outcomes of the patient.

5. Comparison to Related or Competing Measures

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure.

5. Relation to Other NQF-endorsed Measures

Are there related measures (conceptually, either same measure focus or target population) or competing measures (conceptually both the same measure focus and same target population)? If yes, list the NQF # and title of all related and/or competing measures.
No

5.1a. List of related or competing measures (selected from NQF-endorsed measures)

5.1b. If related or competing measures are not NQF endorsed please indicate measure title and steward.

5a. Harmonization of Related Measures

The measure specifications are harmonized with related measures;

OR

The differences in specifications are justified

5a.1. If this measure conceptually addresses EITHER the same measure focus OR the same target population as NQF-endorsed measure(s):

Are the measure specifications harmonized to the extent possible?

5a.2. If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.

5b. Competing Measures

The measure is superior to competing measures (e.g., is a more valid or efficient way to measure);

OR

Multiple measures are justified.

5b.1. If this measure conceptually addresses both the same measure focus and the same target population as NQF-endorsed measure(s):

Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible.)

N/A

Appendix

A.1 Supplemental materials may be provided in an appendix. All supplemental materials (such as data collection instrument or methodology reports) should be organized in one file with a table of contents or bookmarks. If material pertains to a specific submission form number, that should be indicated. Requested information should be provided in the submission form and required attachments. There is no guarantee that supplemental materials will be reviewed.

[Attachment Attachment: 0642F_TFPM_Supplement_20171122_FINAL.pdf](#)

Contact Information

Co.1 Measure Steward (Intellectual Property Owner): American College of Cardiology

Co.2 Point of Contact: Sana, Gokak, comment@acc.org, 202-375-6596-

Co.3 Measure Developer if different from Measure Steward: American College of Cardiology

Co.4 Point of Contact: Esteban, Perla, eperla@acc.org, 202-375-6499-

Additional Information

Ad.1 Workgroup/Expert Panel involved in measure development

Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.

Randal J. Thomas, MD, MS, FAHA, FACP, Chair; Marjorie King, MD, FACC, FAACVPR, member; Karen Lui, RN, C, MS, FAACVPR, member; Ileana L. Piña, MD, FACC, member; John Spertus, MD, MPH, FACC, member; Neil Oldridge, PhD, FAACVPR

The expert workgroup reviewed the available guidelines and other evidence, proposed and specified measures, responded to comments during peer review and public comment, continues to advise on additional specification of the measure and updates.

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.2 Year the measure was first released: 2007

Ad.3 Month and Year of most recent revision: 09, 2010

Ad.4 What is your frequency for review/update of this measure? Approximately every 3 years or as needed if evidence changes or due to feedback from implementation

Ad.5 When is the next scheduled review/update for this measure? 06, 2018

Ad.6 Copyright statement: Copyright 2010, American Association for Cardiovascular and Pulmonary Rehabilitation, American College of Cardiology Foundation and the American Heart Association

Ad.7 Disclaimers: These measures and specifications are provided "as is" without warranty of any kind. Neither the AACVPR, the ACCF, nor the AHA shall be responsible for any use of these performance measures.

Limited proprietary coding is contained in the measure specifications (online data supplement) for convenience. Users of the proprietary code sets should obtain all necessary licenses from the owners of these code sets. The AACVPR, the ACCF, and the AHA disclaim all liability for use or accuracy of any Current Procedural Terminology (CPT™) or other coding contained in the specifications.

CPT™ contained in the online data supplement is ©2009 American Medical Association.

Ad.8 Additional Information/Comments: None