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PERFORMANCE MEASURES

# AACVPR/ACCF/AHA 2010 Update: Performance Measures on Cardiac Rehabilitation for Referral to Cardiac Rehabilitation/Secondary Prevention Services

A Report of the American Association of Cardiovascular and Pulmonary Rehabilitation and the American College of Cardiology Foundation/American Heart Association Task Force on Performance Measures (Writing Committee to Develop Clinical Performance Measures for Cardiac Rehabilitation)

*Endorsed by the American College of Chest Physicians, the American College of Sports Medicine, the American Physical Therapy Association, the Canadian Association of Cardiac Rehabilitation, the Clinical Exercise Physiology Association, the European Association for Cardiovascular Prevention and Rehabilitation, the Inter-American Heart Foundation, the National Association of Clinical Nurse Specialists, the Preventive Cardiovascular Nurses Association, and the Society of Thoracic Surgeons*

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## TABLE OF CONTENTS



## Preamble

Over the past decade, there has been an increasing awareness that the quality of medical care delivered in the United States is variable. In its seminal document dedicated to characterizing deficiencies in delivering effective, timely, safe, equitable, efficient, and patient-centered medical care, the Institute of Medicine described a quality "chasm" (1). Recognition of the magnitude of the gap between the care that is delivered and the care that ought to be provided has stimulated interest in the development of measures of quality of care and the use of such measures for the purposes of quality improvement and accountability.

Consistent with this national focus on healthcare quality, the American College of Cardiology Foundation (ACCF) and the American Heart Association (AHA) have taken a leadership role in developing measures of the quality of care for cardiovascular disease (CVD) in several clinical areas (Table 1). The ACCF/AHA Task Force on Performance Measures was formed in February 2000 and was charged with identifying the clinical topics appropriate for the development of performance measures and assembling writing committees composed of clinical and methodological experts. When appropriate, these committees include representatives from other organizations with an interest in the clinical topic under consideration. The committees are informed about the methodology of performance measure development and are instructed to construct measures for use both prospectively and retrospectively, rely upon easily documented clinical criteria, and where appropriate, incorporate administrative data. The data elements required for the performance measures are linked to existing ACCF/AHA clinical data standards to encourage uniform measurements of cardiovascular care. The writing committees are also instructed to evaluate the extent to which existing nationally recognized performance measures conform to the attributes of performance measures described by the ACCF/AHA and to strive to create measures aligned with acceptable existing measures when this is feasible.

The initial measure sets published by the ACCF/AHA focused primarily on processes of medical care or actions taken by healthcare providers, such as the prescription of a medication for a condition. These process measures are founded on the strongest recommendations contained in the ACCF/AHA clinical practice guidelines, delineating actions taken by clinicians in the care of patients, such as the prescription of a particular drug for a specific condition. Specifically, the writing committees consider as candidates for measures those processes

**Table 1. ACCF/AHA Performance Measure Sets**

| Topic | Original Publication Date | Partnering Organizations | Status |
|---|---|---|---|
| Chronic heart failure (2) | 2005 | ACC/AHA—Inpatient measures<br>ACC/AHA/PCPI—Outpatient measures | Currently undergoing update<br>Currently undergoing update |
| Chronic stable coronary artery disease (3) | 2005 | ACC/AHA/PCPI | Currently undergoing update |
| Hypertension (4) | 2005 | ACC/AHA/PCPI | Currently undergoing update |
| ST-elevation and non–ST-elevation myocardial infarction (5) | 2006 | ACC/AHA | Updated 2008 (6) |
| Cardiac rehabilitation (7) | 2007 | AACVPR/ACC/AHA | Updated 2010 (referral measures only) |
| Atrial fibrillation (8) | 2008 | ACC/AHA/PCPI | |
| Primary prevention of cardiovascular disease (9) | 2009 | ACCF/AHA | |
| Peripheral artery disease | 2010* | ACCF/AHA/ACR/SCAI/SIR/SVM/ SVN/SVS | Under development |
| Percutaneous coronary intervention | 2011* | ACCF/AHA/SCAI/PCPI/NCQA | Under development |

*Planned publication date.

AACVPR indicates American Association of Cardiovascular and Pulmonary Rehabilitation; ACR, American College of Radiology; NCQA, National Committee for Quality Assurance; PCPI indicates American Medical Association—Physician Consortium for Performance Improvement; SCAI, Society for Cardiac Angiography and Interventions; SIR, Society for Interventional Radiology; SVM, Society for Vascular Medicine; SVN, Society for Vascular Nursing; and SVS, Society for Vascular Surgery.

**Table 2. Applying Classification of Recommendations and Level of Evidence**

| ESTIMATE OF CERTAINTY (PRECISION) OF TREATMENT EFFECT | SIZE OF TREATMENT EFFECT: CLASS I<br>*Benefit >>> Risk*<br>Procedure/Treatment **SHOULD** be performed/ administered | CLASS IIa<br>*Benefit >> Risk*<br>*Additional studies with focused objectives needed*<br>**IT IS REASONABLE** to perform procedure/administer treatment | CLASS IIb<br>*Benefit ≥ Risk*<br>*Additional studies with broad objectives needed; additional registry data would be helpful*<br>Procedure/Treatment **MAY BE CONSIDERED** | CLASS III *No Benefit* or CLASS III *Harm*<br>Procedure/ Test / Treatment<br>COR III: No benefit — Not Helpful / No Proven Benefit<br>COR III: Harm — Excess Cost w/o Benefit or Harmful / Harmful to Patients |
|---|---|---|---|---|
| **LEVEL A**<br>Multiple populations evaluated*<br>Data derived from multiple randomized clinical trials or meta-analyses | ■ Recommendation that procedure or treatment is useful/effective<br>■ Sufficient evidence from multiple randomized trials or meta-analyses | ■ Recommendation in favor of treatment or procedure being useful/effective<br>■ Some conflicting evidence from multiple randomized trials or meta-analyses | ■ Recommendation's usefulness/efficacy less well established<br>■ Greater conflicting evidence from multiple randomized trials or meta-analyses | ■ Recommendation that procedure or treatment is not useful/effective and may be harmful<br>■ Sufficient evidence from multiple randomized trials or meta-analyses |
| **LEVEL B**<br>Limited populations evaluated*<br>Data derived from a single randomized trial or nonrandomized studies | ■ Recommendation that procedure or treatment is useful/effective<br>■ Evidence from single randomized trial or nonrandomized studies | ■ Recommendation in favor of treatment or procedure being useful/effective<br>■ Some conflicting evidence from single randomized trial or nonrandomized studies | ■ Recommendation's usefulness/efficacy less well established<br>■ Greater conflicting evidence from single randomized trial or nonrandomized studies | ■ Recommendation that procedure or treatment is not useful/effective and may be harmful<br>■ Evidence from single randomized trial or nonrandomized studies |
| **LEVEL C**<br>Very limited populations evaluated*<br>Only consensus opinion of experts, case studies, or standard of care | ■ Recommendation that procedure or treatment is useful/effective<br>■ Only expert opinion, case studies, or standard of care | ■ Recommendation in favor of treatment or procedure being useful/effective<br>■ Only diverging expert opinion, case studies, or standard of care | ■ Recommendation's usefulness/efficacy less well established<br>■ Only diverging expert opinion, case studies, or standard of care | ■ Recommendation that procedure or treatment is not useful/effective and may be harmful<br>■ Only expert opinion, case studies, or standard of care |
| Suggested phrases for writing recommendations | should<br>is recommended<br>is indicated<br>is useful/effective/beneficial | is reasonable<br>can be useful/effective/beneficial<br>is probably recommended or indicated | may/might be considered<br>may/might be reasonable<br>usefulness/effectiveness is unknown/unclear/uncertain or not well established | COR III: No Benefit: is not recommended; is not indicated; should not be done; is not useful/ beneficial/ effective<br>COR III: Harm: potentially harmful; causes harm; associated with excess morbidity/mortality; should not be done |
| Comparative effectiveness phrases† | treatment/strategy A is recommended/indicated in preference to treatment B<br>treatment A should be chosen over treatment B | treatment/strategy A is probably recommended/indicated in preference to treatment B<br>it is reasonable to choose treatment A over treatment B | | |

*Data available from clinical trials or registries about the usefulness/efficacy in different subpopulations, such as gender, age, history of diabetes, history of prior myocardial infarction, history of heart failure, and prior aspirin use. A recommendation with Level of Evidence B or C does not imply that the recommendation is weak. Many important clinical questions addressed in the guidelines do not lend themselves to clinical trials. Even though randomized trials are not available, there may be a very clear clinical consensus that a particular test or therapy is useful or effective. †For comparative effectiveness recommendations (Class I and IIa; Level of Evidence A and B only), studies that support the use of comparator verbs should involve direct comparisons of the treatments or strategies being evaluated.

of care that are recommended by the guidelines either as Class I, which identifies procedures/treatments that should be administered, or Class III, which identifies procedures/ treatments that should not be administered (Table 2). Class II recommendations are not considered as candidates for performance measures. The methodology guiding the translation of guideline recommendations into process measures has been explicitly delineated by the ACCF/AHA, providing guidance to the writing committees (10).

Although they possess several strengths, processes of care are limited as the sole measures of quality. Thus, current ACCF/ AHA performance measures writing committees are instructed to consider measures of structures of care, outcomes, and efficiency as complements to process measures. In developing such measures, the committees are guided by methodology established by the ACCF/AHA (11). Although implementation of measures of outcomes and efficiency is currently not as well established as that of process measures, it is expected that such measures will become more pervasive over time.

Although the focus of the performance measures writing committees is on measures intended for quality improvement efforts, other organizations may use these measures for external review or public reporting of provider performance. Therefore, it is within the scope of the writing committee's task to comment,

when appropriate, on the strengths and limitations of such external reporting for a particular CVD state or patient population. Thus, the metrics contained within this document are categorized as either *performance measures* or *test measures*. Performance measures are those metrics that the committee designates as appropriate for use for both quality improvement and external reporting. In contrast, test measures are those appropriate for the purposes of quality improvement but not for external reporting until further validation and testing are performed.

All measures have limitations and pose challenges to implementation that could result in unintended consequences when used for accountability. The implementation of measures for purposes other than quality improvement requires field testing to address issues related but not limited to sample size, frequency of use of an intervention, comparability, and audit requirements. The manner in which these issues are addressed is dependent on several factors, including the method of data collection, performance attribution, baseline performance rates, incentives, and public reporting methods. The ACCF/AHA encourages those interested in implementing these measures for purposes beyond quality improvement to work with the ACCF/AHA to consider these complex issues in pilot implementation projects, to assess limitations and confounding factors, and to guide refinements of the measures to enhance their utility for these additional purposes.

By facilitating measurements of cardiovascular healthcare quality, ACCF/AHA performance measurement sets may serve as vehicles to accelerate appropriate translation of scientific evidence into clinical practice. These documents are intended to provide practitioners and institutions that deliver care with tools to measure the quality of their care and identify opportunities for improvement. It is our hope that application of these performance measures will provide a mechanism through which the quality of medical care can be measured and improved.

*Frederick A. Masoudi, MD, MSPH, FACC, FAHA*
*Chair, ACCF/AHA Task Force on Performance Measures*

## 1. Update of Performance Measures for Referral to Cardiac Rehabilitation

### 1.1. Background

The AACVPR/ACC/AHA 2007 Performance Measures on Cardiac Rehabilitation for Referral to and Delivery of Cardiac Rehabilitation/Secondary Prevention Services were published in October 2007 (7). This document updates the 2 measures that articulate the opportunities to improve referrals to outpatient Cardiac Rehabilitation that were embodied in Measure Set A from that 2007 paper (Appendix A in [7]). Measure A-1 (Cardiac Rehabilitation Patient Referral From an Inpatient Setting) and measure A-2 (Cardiac Rehabilitation Patient Referral From an Outpatient Setting) have been revised to clarify several aspects of the measures and to facilitate their implementation. The updated measures (Appendix B) have been revised as described in the following text. The measures in Measure Set B from the 2007 paper related to the structure and processes of care for cardiac rehabilitation programs remain unchanged and are not included in this update.

### 1.2. Measure A-1. Cardiac Rehabilitation Patient Referral From an Inpatient Setting

***Numerator Exclusion Criteria:***

- "Patient-oriented barriers" was revised to "patient-oriented factors," and the example provided was changed. Patient refusal, which was listed as an example in the 2007 paper, should not be considered a reason not to provide a referral. Whether the patient chooses to act upon the referral or not is beyond the provider's control. The example provided in this update clarifies that patients discharged to a nursing care facility for long-term care can be excluded.
- "Provider-oriented barriers" was revised to "medical factors," and the examples provided were changed. The 2007 measures listed "patient deemed to have a high-risk condition or a contraindication to exercise" as an example. This was revised to specify "medically unstable, life-threatening condition" as an example of an appropriate medical exclusion. The rationale reflects the capacity of cardiac rehabilitation programs to modify their program to the medical needs of individual patients and that, other than life-threatening conditions, there are no *a priori* reasons to presume that a patient might not be able to participate in a rehabilitation and secondary prevention program.
- "Health care system barriers" was revised to "health-care system factors," and the examples provided were changed. "Financial barriers" was deleted and "lack of CR programs near a patient's home" was clarified to specify no cardiac rehabilitation program available within 60 minutes of travel time from the patient's home.

***Denominator:***

A note was added to clarify that 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.

***Corresponding Guidelines and Clinical Recommendations:***

The recommendations in this section were updated to reflect the most recent iterations of the guidelines cited.

### 1.3. Measure A-2. Cardiac Rehabilitation Patient Referral From an Outpatient Setting

***Numerator:***

- The note describing what constitutes a referral has been expanded to clarify that standards of practice for cardiac rehabilitation programs require care coordination communications to be sent to the referring provider, including any issues regarding treatment changes, adverse treatment responses, or new non-

emergency condition (new symptoms, patient care questions, etc.) that need attention by the referring provider. These communications also include a progress report once the patient has completed the program.

- Exclusion criteria: The same revisions made to the patient, medical, and health system factors described for Measure A-1 in Section 1.2 were made to this measure.

***Denominator:***

The denominator statement was clarified to specify that only patients who have had a qualifying event/diagnosis during the previous 12 months and have not participated in an outpatient cardiac rehabilitation program since the qualifying event/diagnosis should be included.

***Attribution/Aggregation:***

This section was added to clarify that 1) the measure should be reported by the clinician who provides the primary cardiovascular-related care for the patient (In general, this would be the patient's cardiologist, but in some cases it might be a family physician, internist, nurse practitioner, or other healthcare provider.); and 2) the level of aggregation (clinician versus practice) will depend upon the availability of adequate sample sizes to provide stable estimates of performance.

### 1.4. Administrative Codes to Identify Denominator-Eligible Populations

To facilitate implementation of these measures in a variety of systems, we have included administrative codes that may be useful in identifying the population of patients who are eligible for inclusion in the denominator for each of the updated measures. See the online data supplement for details.

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**Key Words:** ACCF/AHA performance measures ■ update ■ cardiac rehabilitation ■ secondary prevention.

## APPENDIX A. AUTHOR RELATIONSHIPS WITH INDUSTRY AND OTHER ENTITIES—AACVPR/ACCF/AHA 2010 UPDATE: PERFORMANCE MEASURES ON CARDIAC REHABILITATION FOR REFERRAL TO CARDIAC REHABILITATION/SECONDARY PREVENTION SERVICES

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This table represents the relationships of committee members with industry and other entities that were reported by authors to be relevant to this document. These relationships were reviewed and updated in conjunction with all meetings and/or conference calls of the writing committee during the document development process. The table does not necessarily reflect relationships with industry at the time of publication. A person is deemed to have a significant interest in a business if the interest represents ownership of 5% or more of the voting stock or share of the business entity, or ownership of $10,000 or more of the fair market value of the business entity; or if funds received by the person from the business entity exceed 5% of the person's gross income for the previous year. A relationship is considered to be modest if it is less than significant under the preceding definition. Relationships in this table are modest unless otherwise noted. *Significant (greater than $10,000) relationship.

# APPENDIX B. AACVPR/ACCF/AHA 2010 UPDATE: PERFORMANCE MEASURES ON CARDIAC REHABILITATION FOR REFERRAL TO CARDIAC REHABILITATION/SECONDARY PREVENTION SERVICES

**Performance Measure A-1**

**A-1. Cardiac Rehabilitation Patient Referral From an Inpatient Setting**

**All patients hospitalized with a primary diagnosis of an acute myocardial infarction (MI) or chronic stable angina (CSA), or who during hospitalization have undergone coronary artery bypass graft (CABG) surgery, a percutaneous coronary intervention (PCI), cardiac valve surgery, or cardiac transplantation are to be referred to an early outpatient cardiac rehabilitation/secondary prevention (CR) program.**

| | |
|---|---|
| **Numerator** | Number of eligible patients with a qualifying event/diagnosis who have been referred to an outpatient CR program prior to hospital discharge or have a documented medical or patient-centered reason why such a referral was not made.<br><br>(Note: The program may include a traditional CR program based on face-to-face interactions and training sessions or may include other options such as home-based approaches. If alternative CR approaches are used, they should be designed to meet appropriate safety standards.)<br><br>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 CR program. This includes the provision of all necessary information to the patient that will allow the patient to enroll in an early outpatient CR program. This also includes a written or electronic 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 potentially be formatted to include the necessary patient information to communicate to the CR program (e.g., the patient's cardiovascular history, testing, and treatments). All communications must maintain appropriate confidentiality as outlined by the 1996 Health Insurance Portability and Accountability Act (HIPAA).<br><br>*Exclusion criteria:*<br>• Patient factors (e.g., patient to be discharged to a nursing care facility for long-term care).<br>• Medical factors (e.g., patient deemed by provider to have a medically unstable, life-threatening condition).<br>• Health care system factors (e.g., no cardiac rehabilitation program available within 60 minutes of travel time from the patient's home). |
| **Denominator** | Number of hospitalized patients in the reporting period hospitalized with a qualifying event/diagnosis who do not meet any of the exclusion criteria mentioned in the Numerator section.<br><br>(Note: 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 in-patient team during the index hospitalization. This referral should be reinforced by the care team at the medical rehabilitation facility.) |
| **Period of Assessment** | Inpatient hospitalization. |
| **Method of Reporting** | Proportion of healthcare system's patients with a qualifying event/diagnosis who had documentation of their referral to an outpatient CR program. |
| **Sources of Data** | Administrative data and/or medical records. |

**Rationale**

A key component to outpatient CR program utilization is the appropriate and timely referral of patients. Generally, the most important time for this referral to take place is while the patient is hospitalized for a qualifying event/diagnosis (MI, CSA, CABG, PCI, cardiac valve surgery, or cardiac transplantation).
This performance measure has been developed to help healthcare systems implement effective steps in their systems of care that will optimize the appropriate referral of a patient to an outpatient CR program.
This measure is designed to serve as a stand-alone measure or, preferably, to be included within other performance measurement sets that involve disease states or other conditions for which CR services have been found to be appropriate and beneficial (e.g., following MI, CABG surgery). This performance measure is provided in a format that is meant to allow easy and flexible inclusion into such performance measurement sets.
Effective referral of appropriate inpatients to an outpatient CR program is the responsibility of the healthcare team within a healthcare system that is primarily responsible for providing cardiovascular care to the patient during the hospitalization.

**Corresponding Guidelines and Clinical Recommendations**

ACC/AHA 2004 Guideline Update for Coronary Artery Bypass Graft Surgery (12).
*Class I*
Cardiac rehabilitation should be offered to all eligible patients after CABG (*Level of Evidence: B*).

ACC/AHA 2007 Update of the Guidelines for the Management of Patients With ST-Elevation Myocardial Infarction (13).
*Class I*
Advising medically supervised programs (cardiac rehabilitation) for high-risk patients (e.g., recent acute coronary syndrome or revascularization, heart failure) is recommended (*Level of Evidence: B*).

ACC/AHA 2007 Guidelines for the Management of Patients With Unstable Angina and Non–ST-Segment Elevation Myocardial Infarction (14).
*Class I*
Cardiac rehabilitation/secondary prevention programs are recommended for patients with unstable angina/non–ST-segment elevation MI, particularly those with multiple modifiable risk factors and/or those moderate- to high-risk patients in whom supervised exercise training is particularly warranted (*Level of Evidence: B*).
Cardiac rehabilitation/secondary prevention programs, when available, are recommended for patients with unstable angina/non–ST-segment elevation MI, particularly those with multiple modifiable risk factors and those moderate- to high-risk patients in whom supervised or monitored exercise training is warranted (*Level of Evidence: B*).

ACC/AHA 2007 Chronic Angina Focused Update of the Guidelines for the Management of Patients With Chronic Stable Angina (15).
*Class I*
Medically supervised programs (cardiac rehabilitation) are recommended for at-risk patients (e.g., recent acute coronary syndrome or revascularization, heart failure) (*Level of Evidence: B*).

ACC/AHA Guidelines for the Evaluation and Management of Chronic Heart Failure in the Adult (16).
*Class I*
Exercise training is beneficial as an adjunctive approach to improve clinical status in ambulatory patients with current or prior symptoms of heart failure and reduced left ventricular ejection fraction (LVEF) (*Level of Evidence: B*).

AHA Evidence-Based Guidelines for Cardiovascular Disease Prevention in Women: 2007 Update (17).
*Class I*
A comprehensive risk-reduction regimen, such as cardiovascular or stroke rehabilitation or a physician-guided home- or community-based exercise training program, should be recommended to women with a recent acute coronary syndrome or coronary intervention, new-onset or chronic angina, recent cerebrovascular event, peripheral arterial disease (*Level of Evidence: A*), or current/prior symptoms of heart failure and an LVEF $<$40% (*Level of Evidence: B*).

ACC/AHA/SCAI 2007 Focused Update of the Guidelines for Percutaneous Coronary Intervention (18).
*Class I*
Advising medically supervised programs (cardiac rehabilitation) for high-risk patients (e.g., recent acute coronary syndrome or revascularization, heart failure) is recommended (*Level of Evidence: B*).

**Challenges to Implementation**

Identification of all eligible patients in an inpatient setting will require that a timely, accurate, and effective system be in place. Communication of referral information by the inpatient hospital service team to the outpatient CR program represents a potential challenge to the implementation of this performance measure. However, this task is generally performed by an inpatient cardiovascular care team member, such as an inpatient CR team member or a hospital discharge planning team member.

| Performance Measure A-2 | |
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| **A-2. Cardiac Rehabilitation Patient Referral From an Outpatient Setting** | |
| **All patients evaluated in an outpatient setting who within the past 12 months have experienced an acute myocardial infarction (MI), coronary artery bypass graft (CABG) surgery, a percutaneous coronary intervention (PCI), cardiac valve surgery, or cardiac transplantation, or who have chronic stable angina (CSA) and have not already participated in an early outpatient cardiac rehabilitation/secondary prevention (CR) program for the qualifying event/diagnosis are to be referred to such a program.** | |
| **Numerator** | Number of patients in an outpatient clinical practice who have had a qualifying event/diagnosis during the previous 12 months, who have been referred to an outpatient CR program.<br><br>(Note: The program may include a traditional CR program based on face-to-face interactions and training sessions or other options that include home-based approaches. If alternative CR approaches are used, they should be designed to meet appropriate safety standards.)<br><br>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 outpatient CR program. This includes the provision of all necessary information to the patient that will allow the patient to enroll in an outpatient CR program. This also includes a written or electronic 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 potentially be formatted to include the necessary patient information to communicate to the CR program (e.g., the patient's cardiovascular history, testing, and treatments). According to standards of practice for cardiac rehabilitation programs, care coordination communications are sent to the referring provider, including any issues regarding treatment changes, adverse treatment responses, or new nonemergency condition (new symptoms, patient care questions, etc.) that need attention by the referring provider. These communications also include a progress report once the patient has completed the program. All communications must maintain an appropriate level of confidentiality as outlined by the 1996 Health Insurance Portability and Accountability Act (HIPAA).<br><br>*Exclusion criteria:*<br>• Patient factors (e.g., patient resides in a long-term nursing care facility).<br>• Medical factors (e.g., patient deemed by provider to have a medically unstable, life-threatening condition).<br>• Health care system factors (e.g., no cardiac rehabilitation program available within 60 min of travel time from the patient's home). |
| **Denominator** | Number of patients in an outpatient clinical practice who have had a qualifying event/diagnosis during the previous 12 months and who do not meet any of the exclusion criteria mentioned in the Numerator section, and who have not participated in an outpatient cardiac rehabilitation program since the qualifying event/diagnosis. |
| **Period of Assessment** | Twelve months following a qualifying event/diagnosis. |
| **Method of Reporting** | Proportion of patients in an outpatient practice who have had a qualifying event/diagnosis during the past 12 months and have been referred to a CR program. |
| **Sources of Data** | Administrative data and/or medical records. |
| **Attribution/Aggregation** | This measure should be reported by the clinician who provides the primary cardiovascular-related care for the patient. In general, this would be the patient's cardiologist, but in some cases it might be a family physician, internist, nurse practitioner, or other health-care provider. The level of "aggregation" (clinician versus practice) will depend upon the availability of adequate sample sizes to provide stable estimates of performance. |
| **Rationale** | |
| Cardiac rehabilitation services have been shown to help reduce morbidity and mortality in persons who have experienced a recent coronary artery disease event, but these services are used in less than 30% of eligible patients (19). A key component to CR utilization is the appropriate and timely referral of patients to an outpatient CR program. While referral takes place generally while the patient is hospitalized for a qualifying event (MI, CSA, CABG, PCI, cardiac valve surgery, or heart transplantation), there are many instances in which a patient can and should be referred from an outpatient clinical practice setting (e.g., when a patient does not receive such a referral while in the hospital, or when the patient fails to follow through with the referral for whatever reason).<br>This performance measure has been developed to help healthcare systems implement effective steps in their systems of care that will optimize the appropriate referral of a patient to an outpatient CR program.<br>This measure is designed to serve as a stand-alone measure or, preferably, to be included within other performance measurement sets that involve disease states or other conditions for which CR services have been found to be appropriate and beneficial (e.g., following MI, CABG surgery). This performance measure is provided in a format that is meant to allow easy and flexible inclusion into such performance measurement sets.<br>Referral of appropriate outpatients to a CR program is the responsibility of the healthcare provider within a healthcare system that is providing the primary cardiovascular care to the patient in the outpatient setting. | |
| **Corresponding Guidelines and Clinical Recommendations** | |
| See Clinical Recommendations section from Performance Measure A-1. | |
| **Challenges to Implementation** | |
| Identification all eligible patients in an outpatient clinical practice will require that a timely, accurate, and effective system be in place. Communication of referral information by the outpatient clinical practice team to the outpatient CR program represents a potential challenge to the implementation of this performance measure. | |