



**Coronary Artery Disease
Care Recognition
Clinician Assessment
Policies and Procedures
Manual for Data
Aggregator Submissions**

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INTRODUCTION

Bridges to Excellence (BTE) is excited to offer this opportunity for clinicians to pilot its automated EMR/registry performance assessment system. The BTE EMR/registry performance assessment system allows for rapid and independent medical record-based clinician performance evaluations by connecting local and national medical record data sources to a network of performance assessment organizations. BTE's goals are to: reduce the reporting burden for clinicians; leverage existing reporting/data aggregation initiatives; reduce data collection and reporting costs; facilitate the connection between quality improvement and incentives; and speed up cycle times between reporting, improvement and reporting. Clinicians who meet BTE performance thresholds may be eligible for incentives through participating health plans, employers and coalitions.

This Policies and Procedures Manual provides information on the BTE Coronary Artery Disease (CAD) Care Recognition Program Clinician Assessment process as well as instructions for data aggregators on how to submit clinician data to a Performance Assessment Organization (PAO) through electronic data submissions in order to qualify these clinicians for BTE recognition in the CAD Care Recognition Program. All data must be submitted electronically to a PAO through the methods described here, whether the data is manually entered through chart reviews or submitted through an electronic system, such as an electronic health record, patient registry or decision support tool. Paper submissions will not be accepted.

Measurement results will be determined by collecting denominator (population) and numerator (measurement results) information, for the most recent date of care in order to calculate a result for each clinician or medical practice applicant.

Data aggregators are vendors or organizations that are data sources for clinicians' electronic medical record data (e.g. EMR vendors, patient registry vendors, health information exchanges, community initiatives). Data aggregator roles and responsibilities include: interfacing with clinicians via the electronic data, extracting de-identified medical record data in accordance with BTE's eligibility and measures specifications (as identified in this manual), sending extracted medical record data and clinician identifiers to a PAO quarterly in a standardized electronic format for performance measurement, and communicating performance assessment results and opportunities for improvement back to participating clinicians.

BTE is partnering with two PAOs to implement its automated EMR/registry performance assessment system: Minnesota Community Measurement (MNCM) and IPRO.

MN Community Measurement (MNCM) was formed in 2002 by several local health plans as a collaborative to collect performance data. By aggregating health plan claims data and collecting clinical information from physician offices, MNCM publicly reports physicians' performance results in Minnesota. MNCM's goals include improving care and supporting the quality initiatives of providers, reducing reporting-related expenses for medical groups, health plans, and

regulators through more efficient and effective regulation, and communicating findings in a fair, usable and reliable way to medical groups, regulators, purchasers and consumers.

IPRO is one of the nation's largest and most experienced not-for-profit quality assessment and improvement organizations. IPRO's mission is to improve the quality and value of health care services, and does so by supporting the development and implementation of performance measures; increasing the capacity of providers and government agencies for performance improvement; and fostering an environment through transparency and payment reform efforts, that rewards high-quality, high-value care. With 400 staff, IPRO performs work in over 30 states, serving federal, state and local government, and private clients.

Overview

Bridges to Excellence is a not-for-profit organization developed by employers, physicians, health care services, researchers, and other industry experts with a mission to create significant leaps in the quality of care by recognizing and rewarding health care clinicians who demonstrate that they have implemented comprehensive solutions in the management of patients and deliver safe, timely, effective, efficient, equitable and patient-centered care.

The Coronary Artery Disease Care Recognition Program is a BTE Clinician Recognition Program intended to identify clinicians who deliver high-value coronary artery disease care to adult patients. The program is designed with an understanding that adult patients may seek the care of various types of practitioners—primary care (PCPs), cardiologists, nephrologists, and others—for treatment and management of their coronary artery disease. Accordingly, the measures reflect that clinicians should do the following.

- Deliver high-quality care from the outset of patient contact
- Understand and consider previous treatment history to help avoid inappropriate treatment

The program comprises a set of measures, based on available clinical evidence, that promote a model of care that includes the following criteria.

- Comprehensive patient assessment and reassessment
- Patient education
- Shared decision making

BTE's CAD Care requirements assess clinical measures representing standards of care for patients with coronary artery disease. BTE believes that the CAD Care Recognition program has the potential to significantly improve the quality of care experienced by patients with coronary artery disease and to reduce the financial and human burden of unnecessary hospitalizations and complications.

To earn CAD Care Recognition, clinicians and medical practices voluntarily submit medical record data documenting their delivery of care to coronary artery disease patients. BTE has partnered with two objective third-party independent Performance Assessment Organizations

(PAOs) to evaluate clinician data based on standard measures to publicly recognize those that meet the BTE CAD Care performance thresholds. Those clinicians not meeting the BTE CAD Care performance thresholds remain anonymous to BTE and its health plan licensees. BTE's CAD Care Program has three performance thresholds.

Clinician Benefits of Recognition

- Clinicians can demonstrate to the public and to their professional peers that they meet the standards of care assessed by the program by issuing a press release, as well as having their recognition achievements posted on BTE's consumer portal, HealthGrades (www.healthgrades.com), and communicated to both health plans and employers.
- Clinicians may use the BTE Recognition to demonstrate that they meet the standards of care assessed by the program when contracting with health organizations and purchasers of health services.
- Clinicians can identify areas of their practice that vary from the performance requirements and take steps to improve quality of care.
- Where applicable, clinicians can establish eligibility for pay-for-performance bonuses, differential reimbursement or other incentives from payers and health plans.
- Clinicians who achieve CAD Care Recognition by submitting data through a CCHIT-certified¹ electronic health record or through an electronic health record certified to meet the federally-defined Meaningful Use criteria will also receive BTE Level II Physician Office Link (POL) recognition.

Background on the Measurement Criteria

Eligible clinicians and medical practices voluntarily apply for BTE Recognition by submitting information on how they treat and manage their patients with regard to the following.

Clinical measures²

1. Blood pressure (BP) control
2. LDL control
3. Complete lipid profile
4. Evaluation of activity level and anginal symptoms
5. LDL drug therapy
6. Use of aspirin or other antiplatelet therapy
7. ACE inhibitor/ARB therapy

¹ The Certification Commission for Healthcare Information Technology or CCHIT is a recognized certification body for electronic health records and their networks, and an independent, voluntary, private-sector initiative, whose mission is to accelerate the adoption of health information technology by creating an efficient, credible and sustainable certification program. A list of CCHIT-certified products can be found at <http://cchit.org/>.

² *Clinical measures* evaluate performance based on care provided to a sample of individual patients and documented in the medical records of those patients. Clinical measures are scored based on the percentage of the sample (denominator) which meet or comply (numerator) with the measure threshold.

8. Documentation of smoking status and cessation advice and treatment
9. Beta-blocker treatment after a heart attack

Clinicians who demonstrate high-quality performance based on these measures are awarded BTE CAD Care Recognition.

Recognition Program Structure

Given the evidence in the literature advocating the creation of clinician quality reward programs that promote continuous quality improvement amongst its participants, the BTE CAD Care Recognition Program is designed to include 3 levels or tiers of recognition. Assessment for recognition in all 3 tiers is based upon data submitted on the same cardiac measures (listed above).

Level I: Focuses on a clinician-centric³ view of measurement, looking at individual metrics summed to produce a composite score, with the inclusion of “minimum” performance requirements for all intermediate outcome control measures, both poor and superior (i.e., BP control and LDL control). Thresholds have been set to focus on above average performance.

Level II: Focuses on a combination of clinician and patient-centric⁴ measurements. Level II includes the measurement of individual metrics summed to produce a composite score, with the inclusion of “minimum” performance requirements for all intermediate outcome control measures. Also looks at the defect rate of care delivery across poor control measures on a per patient basis. Thresholds have been set to focus on very good performance.

Level III: Focuses on patient-centric view of measurement, looking at the defect rate of care delivery across superior control measures on a per patient basis. Clinicians must demonstrate that they are using advanced processes and delivering all the right care on a per patient basis. Thresholds have been set to focus on exceptional performance.

³ Clinician-centric refers to performance assessment involving evaluation of clinician performance based upon discrete measures (i.e. BP <140/90), which is applied across the eligible patient panel. The results provide a picture of a clinician’s performance on a given measures across his or her eligible patient panel. Since the process leads to clinician-focused results it is said to be “clinician-centric.”

⁴ Patient centric refers to performance assessment involving evaluation of clinician performance based upon composite measures, created by combining 2 or more separate discrete measures into a single measure (i.e. combining BP <140/90 and LDL <100mg/dl into 1 single measure), which is applied on a per patient basis. The results provide a picture of an individual patient’s performance on a set of measures which make-up the composite measure. Since the process leads to patient-focused results it is said to be “patient-centric.”

What Recognition Requires

To seek BTE CAD Care Recognition, clinician applicants must submit medical record data that demonstrates they meet BTE's CAD Care performance requirements. Each measure has an assigned maximum available point value; the total of all the measures and standards is the same across all levels of recognition. A clinician achieves points for a measure based on the percentage of his or her patient sample that meets or exceeds the set thresholds for that measure.

Performance Assessment Organizations (PAOs) award recognition to clinicians who achieve at least:

Level I: 60% of the total possible points
Level II: 60% of the total possible points
Level III: 60% of the total possible points

Minimum Requirements

To be eligible for recognition, clinicians must submit data sufficient to score at least 60 percent of the total possible points. In the case of clinical measures, this means a minimum of 25 patients for the denominator of each measure for individual clinician applicants, and a minimum of 10 patients for the denominator of each measure for each individual clinician in a practice level applicant, with a minimum practice average of 25 patients per clinician.

To achieve points for the discrete intermediate outcomes control measures (i.e., BP, LDL), as well as some process measures, applicants must meet certain minimum criteria. Applicants who fail to meet the minimum criteria on a measure will receive 0 points for that measure. Applicants must qualify for each level of recognition before they can be assessed for a subsequent level (e.g., must pass Level I to be assessed for Level II).

Tables 1, 2 and 3 show the program measures and the associated point values for scoring clinicians' performance.

Table 1: CAD Care Level I Measures, Performance Criteria and Scoring

Level I focuses on a clinician-centric view of measurement, looking at individual metrics summed to produce a composite score, with the inclusion of minimum requirements for intermediate outcome control measures (i.e., BP control and LDL control). Thresholds have been set to focus on above average performance.

Clinical Measures	Threshold	Minimum Criteria	Maximum Points
<i>Poor Control Measures⁵</i>			
Blood Pressure Control	≥ 145/95	≤ 45% of pts in sample	20
LDL Control	≥ 130 mg/dl	≤ 40% of pts in sample	20
<i>Superior Control Measures</i>			
Blood Pressure Superior Control	< 140/90	≥ 20% of pts in sample	10
LDL Superior Control	< 100 mg/dl	≥ 25% of pts in sample	10
<i>Process Measures</i>			
Evaluation of Activity and Anginal Symptoms	N/A	≥ 65% of pts in sample	5
Smoking Status and Cessation Advice and Treatment	N/A	N/A	5
Complete Lipid Profile	N/A	N/A	2.5
LDL Drug Therapy	N/A	N/A	2.5
Use of Aspirin or Other Antiplatelet Therapy	N/A	≥ 50% of pts in sample	5
ACE Inhibitor/ARB Therapy ⁶	N/A	≥ 75% of pts in sample	7.5
Beta-Blocker Treatment After a Heart Attack ⁶	N/A	≥ 75% of pts in sample	7.5
Continued Beta-Blocker Therapy ⁶	N/A	≥ 75% of pts in sample	5
Total Points			100
Percentage of Total Points Needed to Achieve Recognition			60

⁵ Poor control measures, both discrete and composite, are measures of poor care. A lower percentage is representative of good care. The number of points awarded to the applicant for a poor control measure is calculated by (1 – the percentage of patients meeting the threshold) x the maximum points for that measure.

⁶ Measure is applicable to a subset of the eligible patient population only and requires a minimum of 25 eligible patients for the denominator subset. Applicants who do not meet this measure-specific patient minimum will not be scored on this measure, and the maximum points for the measure will be removed from the total possible points. 60 percent of the total possible points are needed to achieve recognition in these cases.

Table 2: CAD Care Level II Measures, Performance Criteria and Scoring

Level II focuses on a combination of clinician and patient-centric measurements. Level II includes the measurement of individual metrics summed to produce a composite score, with the inclusion of “minimum” requirements for all intermediate outcome control measures. Also looks at the defect rate of care delivery across poor control measures on a per patient basis. Thresholds have been set to focus on very good performance.

Clinical Measures	Threshold	Minimum Criteria	Maximum Points
<i>Poor Control Composite Measure⁵</i>			
Blood Pressure Control	≥ 145/95	N/A	40
LDL Control	≥ 130 mg/dl		
<i>Superior Control Measures</i>			
Blood Pressure Superior Control	< 140/90	≥ 20% of pts in sample	10
LDL Superior Control	< 100 mg/dl	≥ 25% of pts in sample	10
<i>Process Measures</i>			
Evaluation of Activity and Anginal Symptoms	N/A	≥ 65% of pts in sample	5
Smoking Status and Cessation Advice and Treatment	N/A	N/A	5
Complete Lipid Profile	N/A	N/A	2.5
LDL Drug Therapy	N/A	N/A	2.5
Use of Aspirin or Other Antiplatelet Therapy	N/A	≥ 50% of pts in sample	5
ACE Inhibitor/ARB Therapy ⁶	N/A	≥ 75% of pts in sample	7.5
Beta-Blocker Treatment After a Heart Attack ⁶	N/A	≥ 75% of pts in sample	7.5
Continued Beta-Blocker Therapy ⁶	N/A	≥ 75% of pts in sample	5
Total Points			100
Percentage of Total Points Needed to Achieve Recognition			60

⁵ Poor control measures, both discrete and composite, are measures of poor care. A lower percentage is representative of good care. The number of points awarded to the applicant for a poor control measure is calculated by (1 – the percentage of patients meeting the threshold) x the maximum points for that measure.

⁶ Measure is applicable to a subset of the eligible patient population only and requires a minimum of 25 eligible patients for the denominator subset. Applicants who do not meet this measure-specific patient minimum will not be scored on this measure, and the maximum points for the measure will be removed from the total possible points. 60 percent of the total possible points are needed to achieve recognition in these cases.

Table 3: CAD Care Level III Measures, Performance Criteria and Scoring

Level III focuses on patient-centric view of measurement, looking at the defect rate of care delivery across poor control and superior control measures on a per patient basis. Clinicians must demonstrate that they are using advanced processes and delivering all the right care on a per patient basis. Thresholds have been set to focus on exceptional performance.

Clinical Measures	Threshold	Criteria	Maximum Points
<i>Poor Control Composite Measure⁵</i>			
Blood Pressure Control	≥ 145/95	N/A	40
LDL Control	≥ 130 mg/dl		
<i>Superior Control Composite Measure</i>			
Blood Pressure Superior Control	< 140/90	N/A	20
LDL Superior Control	< 100 mg/dl		
<i>Process Measures</i>			
Evaluation of Activity and Anginal Symptoms	N/A	≥ 65% of pts in sample	5
Smoking Status and Cessation Advice and Treatment	N/A	N/A	5
Complete Lipid Profile	N/A	N/A	2.5
LDL Drug Therapy	N/A	N/A	2.5
Use of Aspirin or Other Antiplatelet Therapy	N/A	≥ 50% of pts in sample	5
ACE Inhibitor/ARB Therapy ⁶	N/A	≥ 75% of pts in sample	7.5
Beta-Blocker Treatment After a Heart Attack ⁶	N/A	≥ 75% of pts in sample	7.5
Continued Beta-Blocker Therapy ⁶	N/A	≥ 75% of pts in sample	5
Total Points			100
Percentage of Total Points Needed to Achieve Recognition			60

For a sample clinician scoring report, see Appendix B.

⁵ Poor control measures, both discrete and composite, are measures of poor care. A lower percentage is representative of good care. The number of points awarded to the applicant for a poor control measure is calculated by (1 – the percentage of patients meeting the threshold) x the maximum points for that measure.

⁶ Measure is applicable to a subset of the eligible patient population only and requires a minimum of 25 eligible patients for the denominator subset. Applicants who do not meet this measure-specific patient minimum will not be scored on this measure, and the maximum points for the measure will be removed from the total possible points. 60 percent of the total possible points are needed to achieve recognition in these cases.

POLICIES AND PROCEDURES

Eligibility for Clinician Participation

Clinicians may apply for BTE CAD Care Recognition as individuals or part of a medical practice. To be eligible, applicants must meet the following criteria.

- Applicants must be licensed as a medical doctor (M.D. or D.O.), nurse practitioner (N.P.), or physician assistant (P.A.).
- Applicants must provide continuing care for people with coronary artery disease and be able to meet the minimum patient sample sizes.
- Applicants must complete all application materials and agree to the terms of the program by executing a data use agreement and authorization with a data aggregator partner.
- Applicants must submit the required data documenting their delivery of care for all eligible patients in their full patient panel.
- Applicants must use PAO-supplied or approved methods for submitting data electronically.

Individual clinician applicant

An individual clinician applicant represents one licensed clinician practicing in any setting who provides continuing care for patients with coronary artery disease⁷.

Medical practice applicant

A medical practice applicant represents any practice with three or more licensed clinicians who, by formal arrangement, share responsibility for a common panel of patients and practice at the same site, defined as a physical location or street address. For purposes of this assessment process practices of two clinicians or less must apply as individual applicants.

⁷ **Eligible Coronary Artery Disease patients** are 18-75 years of age, with a documented diagnosis of coronary artery disease (as defined by criteria labeled “Patient Eligibility Criteria”) for at least 12 months AND have been under the care of the applicant clinician or practice for at least 12 months. This is defined by documentation of two face-to-face visits for coronary artery disease care between the clinician and the patient: one within 12 months of the last day of the reporting period and one that predates the last day of the reporting period by at least 12 months.

Applying for Recognition

Clinician applicants opt to voluntarily submit their data to a PAO for performance assessment through the Coronary Artery Disease Care Recognition Program. Participating clinicians must execute a data use agreement with the data aggregator partner through which they plan to submit data for BTE’s automated performance assessment process. All data aggregator partners have data use agreements executed with their partnering PAO. All necessary steps will be taken by the data aggregator and PAO to protect the confidentiality of patient data, as required by The Health Insurance Portability and Accountability Act of 1996 (HIPAA). To assist with clinician compliance with HIPAA, the data aggregator partner provides a Business Associate addendum referenced in the data use agreement, which states that both the data aggregator and the clinician applicant will comply with HIPAA requirements.

Clinicians considering applying for recognition should:

1. Determine eligibility. See “Eligibility for Clinician Participation” for more information.
2. Familiarize themselves with the BTE CAD Care measures and specifications. See “What Recognition Requires” and “Requirements for Coronary Artery Disease Care Recognition Program” for more information.
3. Determine whether to apply as an individual clinician or medical practice.

The following outlines the submission process for applicants with electronic data collection systems:

Clinicians submitting through a data aggregator partner are required to submit medical record data for all eligible patients across their full patient population. Data aggregators will submit the most recent patient level data for each participating clinician’s full panel of eligible patients on a quarterly calendar schedule. Files are due by the end of the month following the end of the calendar quarter. The following illustrates the submission cycle due dates for sample reporting periods. Note that these are outside deadlines. Individual file submission dates will be agreed to between the data aggregator and PAO based on the estimated time needed by the data aggregator to prepare the quarterly data submission.

Reporting Period	Submission Deadline
January 1, 2009 – December 31, 2009	January 31, 2010
April 1, 2009 – March 31, 2010	April 30, 2010
July 1, 2009 – June 30, 2010	July 31, 2010
October 1, 2009 – September 30, 2010	October 31, 2010

Clinicians are required to continue submitting data for all eligible patients each quarter unless they cease using the data aggregator's electronic system.

Clinicians that are new to an electronic data aggregator partner's system, where the system is not yet fully integrated in the clinicians' office and patient records have not been backloaded, are required to prospectively enter all eligible patients from their full patient panel into the data aggregator's electronic system. For individual applicants, clinician assessment will automatically be triggered after all required data is submitted through the data aggregator's electronic system for the minimum requirement of 25 eligible patients. For practice level applicants, assessment will automatically be triggered after all required data is submitted through the data aggregator's electronic system for 10 patients per individual clinician and a practice average of 25 patients per clinician. It is assumed that after one full year of usage of the data aggregator's electronic system that all eligible patients will be included.

Once a clinician or medical practice has opted to send their data to a PAO, the necessary data elements, including de-identified patient information for each CAD Care measure as well as clinician identifiers, will be transmitted from the data aggregator partner to the pre-identified PAO. Clinical information and clinician identifiers will be maintained in separate files to ensure that the identities of the clinicians remain unknown during scoring. Clinical data should be linked to the treating clinician through a unique coded clinician identifier assigned by the data aggregator. For practice applications, the clinical patient data should be linked to the individual clinician practice members so that the PAOs can verify that all members of the practice meet the eligibility requirements. Clinical information must be transmitted at the individual patient level so that numerators and denominators presented in any summary data submission can be validated. Clinician identifiers to be submitted include:

- Responsible clinician identifier (unique coded clinician identifier assigned by the data aggregator)
- Clinician name (first, middle, last)
- Clinician address
- Clinician degree
- Clinician specialty
- Clinician gender
- Clinician date of birth
- Medical license number
- DEA number
- Clinician NPI
- Whether data submission occurred through a CCHIT or Meaningful Use certified system

It is the responsibility of the data aggregator to ensure that the responsible clinician identifier assigned to each clinician remains the same over time. This is necessary for the PAO to be able to track recognition status and apply changes to recognition level appropriately.

Medical practices may apply for recognition as a practice or as individual clinicians. However, individual clinician identifiers must be supplied for each clinician included in a practice level

recognition application. Two additional identifiers are also included for clinicians applying for recognition as part of a practice:

- Practice identifier (unique coded practice identifier assigned by the data aggregator)
- Practice name

Relevant de-identified medical record data should be submitted from the data aggregator partner to the pre-identified PAO for each eligible patient in the clinician applicant's patient panel. As part of their agreement with the selected data aggregator, clinicians will be asked to sign an attestation verifying that all eligible patients are being entered into the data aggregator's electronic system as they are seen, and verify whether all eligible patients are included in the system at the time of submission. The clinician identifier file contains an additional field for data aggregators to indicate whether data submitted represents all eligible patients treated by the clinician (full patient panel). For instructions on completing medical record abstraction, see the "Required Standards for Coronary Artery Disease Care \ Recognition" section in this document.

PAOs will provide data aggregators with standard file formats for both the clinical data and clinician identifier data files.

Evaluation Process

The PAO reviews and assesses the completeness of clinician data submitted each quarter and notifies the data aggregator partner if additional information is required. The PAO runs and provides the data aggregator with a file load summary either accepting or rejecting the data aggregator file if invalid or incomplete information is submitted. The load summary will identify which records contain invalid or incomplete data. It is the data aggregator's responsibility to correct or remove the problematic data and resubmit the file(s) to the PAO. The PAO is not required to make any changes to the files submitted by the data aggregators. Completed applications are processed for compliance with performance criteria, and applicant-specific reports with results for all CAD Care measures are produced within 30 days.

All applicants must meet the CAD Care program eligibility requirements to be scored. For practice level applicants, all individual clinicians included in the practice application must meet the CAD Care program eligibility requirements to be scored. If a clinician included in a practice application does not meet the requirements, his or her designated patients' data should be excluded from the scoring. If the remaining members of the practice still meet the eligibility requirements without the backed out clinician and his or her patients, then the PAO can proceed to score the remaining members of the application as a practice. Only clinicians included in the scoring will be sent to BTE's Recognition Data Exchange (RDE) upon a Recognition determination. If the remaining members of the practice do not meet the eligibility requirements without the backed out clinician and his or her patients, then these clinicians will be assessed as individual applicants, if they meet the individual applicant eligibility requirements. (For an example see "Minimum Patient Requirements".) The PAO will inform the data aggregator in its results reports which applicants, if any, were not scored due to inability to meet the eligibility requirements.

Clinician assessment will be ongoing for continuous data submissions. Assessment will be conducted quarterly based on the most current medical record data submitted for each eligible patient (see measures specifications for further details). For patients with no new data submitted in the current quarter, data aggregators will look back for the most recent patient information to be included in the current data submission for performance assessment.

Audit

The PAO is responsible for conducting three levels of audit pertaining to applicant submissions for BTE CAD Care Recognition. The first level of audit is the data aggregator data extraction code review, the second level of audit is the data validation or load summary, and the third level of audit is the clinician chart audit.

Level 1 – Audit of data aggregator data extraction: The PAO will conduct an audit of each data aggregator’s data extraction process prior to accepting applications. The PAO will review the code that the data aggregator is using to extract the clinician data and verify that all eligible patients are accurately included in the denominator. The DA must also provide the PAO with documentation of the code or logic used to extract numerator data to ensure that all data submitted is in accordance with BTE’s measure specifications. Each data aggregator needs to pass the extraction audit before numerator data is abstracted for submission to the PAO. This level of review will also be conducted biannually and upon any changes to the data aggregator data extraction code. Data aggregators are responsible for informing the PAO when any changes are made. See Appendix A for a list of requirements each data aggregator needs to supply to the PAO for the data extraction audit.

Level 2 – Data validation: As stated above, the PAO runs and provides the data aggregator with a file load summary for each file submission, ensuring that each data field contains a valid data value that meets the data field specifications and makes sense in relation to itself and related data fields. The load summary will identify which records contain incomplete or invalid data values and designate them as errors or warnings. There is a zero tolerance policy for errors on required data fields and data values that do not meet data field specifications. It is the data aggregator’s responsibility to correct or remove the problematic data identified as errors and resubmit the file to the PAO. Files will not be rejected for invalid data values in clinical measures fields, but will be counted as a numerator miss for scoring purposes (with the exception of the poor control measures for which it will be counted as a numerator hit). Invalid data values in clinical measures fields are however identified as warnings in the load summary to the data aggregator, which is responsible for reporting this information back to the applicant in order to improve data collection. See Appendix A for the list of data validation checks used by the PAO.

Level 3 – Clinician chart audit: Additionally, BTE reserves the right to complete an audit of any individual or practice application for Recognition. PAOs or specified local organization subcontractors conduct audits of at least 5 percent of applicants from each data aggregator partner each year. CAD Care audits may be completed by fax, mail, electronically or on site, as determined by the PAO. Any data identified by the PAO as irregular will be subject to audit. The remainder of the 5 percent will be selected through a random sampling methodology.

The PAO will notify the data aggregator which will notify the applicant if their application is chosen for audit, ascertain that audit personnel have no conflict of interest with the audited organization and provide instructions on audit requirements. Obtaining final Recognition results takes longer than usual for applicants chosen for audit. For those applicants selected for audit, final Recognition determination will be made within 60 days of the date of data submission. Failure to pass an audit results in no further consideration for the CAD Care program for six months to two years (depending on the audit score) from the date of submission of the application. For further information on clinician chart audit methodology and scoring, see Appendix A.

Scoring

The PAO makes a decision on whether to award Recognition on the basis of the applicant's overall performance against the criteria. Decisions are based on a numeric score. The CAD Care program evaluates performance based upon an aggregate score achieved across the clinical measures. Clinical measures are scored based upon the percentage of the sample which meets or complies with the measure threshold or standard (numerator/denominator) multiplied by the maximum points assigned to the measure to determine the applicant's points total for that measure. Please note that zero points are earned on clinical measures if the percentage of the sample meeting or complying with the measure threshold or standard (numerator/denominator) does not meet the minimum requirements listed for the measure. These clinical measure scores are summed to determine the applicant's final score which is used to assess the applicant's recognition status.

Example 1: For Level I, for Blood Pressure Superior Control, there is a total of 20 points for BP Control <140/90. If 20 percent of the patient sample has this level of BP control, then the clinician has met the minimum requirement for the measure and receives 20% of the total 10 points [$0.20 \times 10 = 2$] or 2 points. If 50 percent of the patient sample has this level of BP control, then the clinician has exceeded the minimum requirement for the measure, and receives 50% of the total 10 points [$0.50 \times 10 = 5$] or 5 points. If the applicant's performance on this measure is less than 20 percent of the patient sample with this level of BP control, then the applicant does not meet the minimum requirement and receives 0 points.

Example 2: For Level II, for the poor control composite measure, there is a total of 40 points for BP Control $\geq 145/95$ and LDL Control ≥ 130 mg/dl. If 20 percent of the patient sample meets at least one of these thresholds, then the clinician receives 80% of the total 40 points [$0.80 \times 40 = 32$] or 32 points⁸. There are no minimum requirements for the poor control composite measure.

Example 3: For Level III, for the superior control composite measure, there is a total of 20 points for BP Control <140/90, and LDL Control <100mg/dl. If 25 percent of the patient sample meets both of these thresholds, then the clinician receives 25% of the total

⁸ Poor control measures, both discrete and composite, are measures of poor care. A lower percentage is representative of good care. The number of points awarded to the applicant for a poor control measure is calculated by $(1 - \text{percentage of patients meeting the threshold}) \times \text{the maximum points for that measure}$.

20 points [0.25 x 20= 5] or 5 points. There are no minimum requirements for the superior control composite measure.

Final Status Determinations

The PAO completes, reviews and makes CAD Care Recognition status determinations. Applicants may, however, appeal a determination of Not Recognized, as described below under Reconsiderations.

The scoring threshold is shown in the table below. For CAD Care Recognition, there are two statuses for each level: Recognized and Not Recognized.

CAD Care Recognition Status	Percentage of Total Possible Points
Recognized	60-100
Not Recognized	0-59

“Recognized” indicates the applicant meets or exceeds the requirements acceptable for the program and that CAD Care Recognition at that level has been achieved. CAD Care Recognitions achieved on or before December 31, 2009 will be effective for three years. Beginning January 1, 2010, the CAD Care Recognition term will be shortened to two years.

“Not Recognized” indicates that the applicant does not meet the requirements acceptable for the program at that level. PAOs do not release the identities of clinicians or practices who do not achieve at least Level I CAD Care Recognition. Applicants who do not achieve Level I Recognition but continue to submit data on a quarterly basis will be reassessed each quarter and awarded recognition upon two consecutive quarters of successful recognition achievement.

Reconsideration

An applicant may request Reconsideration of a Recognition status decision of Not Recognized for any level. The Data Aggregator must receive a request for Reconsideration within 30 days after an applicant is notified of their recognition status. The request must list the measures or other information for which reconsideration is being requested. The clinician or practice may not submit additional documentation at this time, but may state how it believes the PAO misinterpreted the original documentation.

The first level of appeals is conducted at the data aggregator level. The data aggregator partner through which the recognition application was submitted will review the applicant’s data included in the request to ensure that the data submitted to the PAO was extracted in accordance with the BTE CAD Care measures and specifications. If no issues are found, the data aggregator will then verify the data with the PAO, and the PAO will review the scoring of the applicant’s data. In the case of a deadlock, the appeal will be referred to BTE for reconsideration. If necessary, final determination will be made by the physician members of the BTE Board.

The reconsideration decision is final and is provided in writing to the clinician practice requesting Reconsideration.

Reporting Results

As part of BTE's mission to identify and promote quality, PAOs report results to the following:

- To the data aggregator partner through which the recognition application was submitted. The data aggregator is required to share results reports with the clinician applicant to facilitate quality improvement. See Appendix B for a sample results report.
- To BTE: Only Recognized statuses are reported to BTE for display on BTE's consumer portal for recognition information hosted by HealthGrades and transmission to BTE-licensed health plans for associated incentives. Once the final decision is made, the PAO will reveal the identity, program name and program level of the recognized clinicians only. No clinical data is shared with BTE at any point in the process.

PAOs are responsible for monitoring and reporting to BTE through the BTE Recognition Data Exchange (RDE) which CAD Care Recognized clinicians submitted data for assessment through a CCHIT or Meaningful Use certified data aggregator product. These clinicians will automatically receive a Level II Physician Office Link (POL) recognition.

Certificates

BTE issues an official certificate to each recognized clinician.

Duration of Recognition

For CAD Care Recognitions achieved on or before December 31, 2009, Recognition status remains in effect for **3 years** from the date on which a PAO awards recognition. Beginning January 1, 2010, the CAD Care Recognition duration will be shortened to **2 years** from the date on which a PAO awards recognition. For continuously assessed applicants who maintain their current level of recognition, new begin and end recognition dates will be assigned at the time of the most recent assessment. Recognition determinations are made on the basis of a specific patient population. Recognition status remains in effect for the duration of recognition as long as the clinician maintains his or her current practice and patient base. Clinicians are responsible for informing the data aggregator within 30 days who will inform the PAO if they move or change practices.

Changes in Recognition Levels

Continuous data submission applicants are eligible for changes in recognition level. Clinicians who achieve at least Level I CAD Care Recognition will maintain their CAD Care Recognition for the duration of recognition outlined above. However, during this time it is possible for the recognition status to move between program levels (I, II and III) based on changes in clinical data from quarter to quarter. Changes to program level and recognition dates occur according to the following rules:

- Clinicians who achieve a higher level of recognition for two consecutive assessment periods will have their recognition status changed effective the date of the most recent assessment.
- Clinicians recognized at Level II or III can drop in levels of recognition based on lower scoring results for two consecutive assessment periods.
- Each time a clinician’s recognition status changes levels in either direction a new begin recognition date is assigned for the date of the most recent assessment and a new end recognition date is calculated.
- Clinicians who drop below Level I for two consecutive quarterly assessments will be assigned or maintain Level I CAD Care Recognition status and maintain their current begin and end recognition dates.

Example 1: Clinician A

<i>Assessment period</i>	<i>Assessment date</i>	<i>Assessed (Scored) Level⁹</i>	<i>Recognition Level¹⁰</i>	<i>Recognition Dates</i>
10/1/07-9/30/08	10/22/08	Level III	Level III	10/22/08-10/22/2011
1/1/08-12/31/09	1/21/09	Level III	Level III	1/21/09-1/21/2012
4/1/08-3/31/09	4/18/09	Level III	Level III	4/18/09-4/18/2012
7/1/08-6/30/09	7/25/09	Level II	Level III	4/18/09-4/18/2012
10/1/08-9/30/09	10/16/09	Level II	Level II	10/16/09-10/16/2012

Example 2: Clinician B

<i>Assessment period</i>	<i>Assessment date</i>	<i>Assessed (Scored) Level</i>	<i>Recognition Level</i>	<i>Recognition Dates</i>
10/1/08-9/30/09	10/22/09	Not Pass	N/A	N/A
1/1/09-12/31/09	1/21/10	Level II	N/A	N/A
4/1/09-3/31/10	4/18/10	Level II	Level II	4/18/10-4/18/2012
7/1/09-6/30/10	7/25/10	Not Pass	Level II	4/18/10-4/18/2012
10/1/09-9/30/10	10/16/10	Not Pass	Level I	4/18/10-4/18/2012

PAOs are responsible for managing changes to clinician’s start and end recognition date and submitting updated recognition level and recognition dates to the BTE Recognition Data Exchange (RDE) on a monthly basis. PAOs are responsible for alerting data aggregators when applicants’ assessment scores drop in level for one quarter. Data aggregators are responsible for alerting applicants that a second consecutive lower score will result in a change to their recognition level.

⁹ A clinician’s Assessed Level is the BTE level at which the clinician’s data is scored for the current measurement period.

¹⁰ A clinician’s Recognition Level is the BTE level at which the clinician is currently recognized and the level that is distributed to BTE’s health plan licensees and the BTE consumer portal at HealthGrades. A clinician’s Recognition Level may or may not be the same as a clinician’s Assessed Level.

Terms of Recognition

When communicating with patients, third-party payers, managed care organizations (MCOs) and others, clinicians or practices who receive BTE CAD Care Recognition may represent themselves as BTE-recognized and meeting NQF/AQA quality measure requirements; however, clinicians or practices may not characterize themselves as “NQF/AQA-Approved” or “NQF/AQA-Endorsed.” The use of this mischaracterization or other similarly inappropriate statements will be grounds for revocation of status.

Revoking Recognition

PAOs may revoke a Recognition decision if any of the following occurs:

- The clinician or practice submits false data or does not collect data according to the procedures outlined in this manual, as determined by discussion with the clinician or practice or audit of application data and materials.
- The clinician or practice misrepresents the credentials of any of its clinicians.
- The clinician or practice misrepresents its Recognition status.
- The clinician or any of the practice’s clinicians experience a suspension or revocation of medical licensure.
- The clinician or practice has been placed in receivership or rehabilitation and is being liquidated.
- State, federal or other duly authorized regulatory or judicial action restricts or limits the clinician or practice’s operations.
- BTE identifies a significant threat to patient safety or care.

Data Use Terms

Data use terms are outlined in the data use agreement that the applicant signs with the selected data aggregator partner.

BTE CAD Care Recognition Clinical Measures

The following examples illustrate the format used for clinical measures.

Evaluation Program Title: Coronary Artery Disease Care Recognition Program

Clinical Measures

Clinical measures are specific standard measures with a numerator and denominator that reflect performance across a sample of eligible patients based on medical record documentation.

The following items are listed for each clinical measure.

Description: A statement of what is being measured specifically.

Data source: A list of the data sources accepted for the clinical measure.

Explanation: Additional information about the clinical measure.

Numerator: A description of patients in the applicant's eligible patients (domain denominator) who meet the measure threshold or standard.

Denominator Subset: A description of a subset of the applicant's eligible patients (domain denominator) for whom a particular measure is relevant (measure denominator).

Frequency: Time frames associated with the numerator requirements.

Scoring: Performance level (percentage of patients meeting or complying with the measure) translated to points total for a clinical measure.

Information on the Domain's Denominator is consistent across all of the clinical measures and is listed under "Patient Eligibility Criteria".

REQUIREMENTS FOR CORONARY ARTERY DISEASE CARE RECOGNITION PROGRAM

Coronary Artery Disease Care Recognition Program Measurement Set

Clinical Measures Specifications:

1. Blood Pressure Control:

Description: Percentage of patients aged 18 through 75 years with coronary artery disease (CAD) who had most recent blood pressure in poor control (greater than or equal to 145/95 mmHg).

Data source: Electronic data (visit, lab, encounter data, or claims) and/or medical record data (paper-based or EHR). This measure requires the use of claims/encounter or medical record data for identification of patients with coronary artery disease (CAD) for the denominator, and medical record data for blood pressure information for the numerator.

Explanation: The American Heart Association (AHA) and American College of Cardiology (ACC) guidelines for the management of patients with coronary artery disease (CAD) recommend treatment for patients with a BP \geq 145/95 mmHg.

This is a poor control measure. A lower rate indicates better performance (e.g., low rates of poor control indicate better care). It is anticipated that clinicians who provide services for the primary management of coronary artery disease (CAD) will submit this measure.

Numerator: Patients aged 18-75 years with a diagnosis of coronary artery disease (CAD) and most recent systolic blood pressure measurement of \geq 145 mmHg OR diastolic blood pressure of \geq 95 mmHg. See “Patient Eligibility Criteria” for further information on codes to identify patients with CAD. The steps below should be followed to determine the representative blood pressure reading.

1. *Identify the most recent visit to the doctor’s office or clinic in which a BP reading was noted.* BP reading is acceptable if representative BP was obtained during a visit to the clinician’s office or non-emergency outpatient facility, such as clinic or urgent care center.
2. *Identify the lowest systolic and lowest diastolic blood pressure reading from the most recent blood pressure notation in the medical record.* If there are multiple BPs recorded for a single date, use the lowest systolic and lowest diastolic BP on that date as the representative BP. The systolic and diastolic results do not need to be from the same reading.

The patient is numerator compliant if the most recent systolic blood pressure measurement is ≥ 145 mmHg or missing, OR the most recent diastolic blood pressure measurement is ≥ 95 mmHg or missing, OR if the BP reading was not done during the reporting period. The patient is NOT numerator compliant if the most recent systolic blood pressure measurement during the reporting period is <145 mmHg AND the most recent diastolic blood pressure measurement is <95 mmHg.

The following are not acceptable forms of documentation of blood pressure:

1. Use of terms “VS within normal limits,” “VS WNL,” or “Vital signs normal”
2. BP measurements obtained on the same day as a diagnostic or surgical procedure or at an emergency room visit
3. Patient self-reporting

Frequency: Most recent reading over the last 12 months from last day of the reporting period.

Scoring: If $[\text{numerator/denominator}] \leq \text{minimum criteria}$, then Earned Points = $[1 - (\text{numerator/denominator})] \times \text{maximum available points for the measure}$

If $[\text{numerator/denominator}] > \text{minimum criteria}$, then Earned Points = 0

2. Blood Pressure Superior Control:

Description: Percentage of patients aged 18 through 75 years with coronary artery disease (CAD) who had most recent blood pressure in superior control (less than 140/90 mmHg).

Data source: Electronic data (visit, lab, encounter data, or claims) and/or medical record data (paper-based or EHR). This measure requires the use of claims/encounter or medical record data for identification of patients with coronary artery disease (CAD) for the denominator, and medical record data for blood pressure information for the numerator.

Explanation: The American Heart Association (AHA) and American College of Cardiology (ACC) guidelines for the management of patients with coronary artery disease (CAD) recommend a blood pressure management target of < 140/90 mmHg for patients with no coexisting conditions.

Numerator: Patients aged 18-75 years with a diagnosis of coronary artery disease (CAD) and most recent systolic blood pressure measurement of < 140 mmHg AND diastolic blood pressure of < 90 mmHg. See “Patient Eligibility Criteria” for further information on codes to identify patients with CAD. The steps below should be followed to determine the representative blood pressure reading.

1. *Identify the most recent visit to the doctor’s office or clinic in which a BP reading was noted.* BP reading is acceptable if the representative BP was obtained during a visit to the clinician’s office or non-emergency outpatient facility, such as clinic or urgent care center.
2. *Identify the lowest systolic and lowest diastolic blood pressure reading from the most recent blood pressure notation in the medical record.* If there are multiple BPs recorded for a single date, use the lowest systolic and lowest diastolic BP on that date as the representative BP. The systolic and diastolic results do not need to be from the same reading.

The patient is numerator compliant if the most recent systolic blood pressure measurement during the reporting period is < 140 mmHg AND the most recent diastolic blood pressure measurement during the reporting period is <90 mmHg. The patient is NOT numerator compliant if the most recent systolic blood pressure measurement is ≥ 140 mmHg or missing, OR the most recent diastolic blood pressure measurement is ≥ 90 mmHg or missing, OR if the BP reading was not done during the reporting period.

The following are not acceptable forms of documentation of blood pressure:

1. Use of terms “VS within normal limits,” “VS WNL,” or “Vital signs normal”
2. BP measurements obtained on the same day as a diagnostic or surgical procedure or at an emergency room visit
3. Patient self-reporting

Frequency: Most recent reading over the last 12 months from the last day of the reporting period.

Scoring: If [numerator/denominator] \geq minimum criteria, then Earned Points = [numerator/denominator] x maximum available points for the measure

If [numerator/denominator] $<$ minimum criteria, then Earned Points = 0

3. Lipid Control:

Description: Percentage of patients aged 18 through 75 years with coronary artery disease (CAD) who had most recent LDL-C level in poor control (greater than or equal to 130 mg/dl).

Data source: Electronic data (visit, lab, encounter data, or claims) and/or medical record data (paper-based or EHR). This measure requires the use of claims/encounter or medical record data for identification of patients with coronary artery disease (CAD) for the denominator, and laboratory or medical record data for LDL-C test information for the numerator.

Explanation: The American Heart Association (AHA) and American College of Cardiology (ACC) guidelines for the management of patients with coronary artery disease (CAD) recommend treatment for patients with an LDL-C level of ≥ 130 mg/dl.

This is a poor control measure. A lower rate indicates better performance (e.g., low rates of poor control indicate better care). It is anticipated that clinicians who provide services for the primary management of coronary artery disease (CAD) will submit this measure.

Numerator: Patients aged 18-75 years with a diagnosis of coronary artery disease (CAD) and most recent LDL-C level ≥ 130 mg/dl. See “Patient Eligibility Criteria” for further information on codes to identify patients with CAD.

Electronic Collection: The patient is numerator compliant if the laboratory result of the most recent LDL-C test is ≥ 130 mg/dl, is missing, or if the test was not done during the reporting period. The patient is NOT numerator compliant if the laboratory result of the most recent LDL-C test during the reporting period is < 130 mg/dl.

Medical Record Collection: The patient is numerator compliant if the result of the most recent LDL-C test is ≥ 130 mg/dl, is missing, or if the test was not done during the reporting period. The patient is NOT numerator compliant if the result of the most recent LDL-C test during the reporting period is < 130 mg/dl.

At a minimum, documentation in the medical record must include a note indicating the date on which the LDL-C test was performed and the result. LDL-C levels may be calculated from total cholesterol, HDL-C and triglycerides using the Friedewald equation if the triglycerides are ≤ 400 mg/dl:

$$\text{LDL-C} = (\text{total cholesterol}) - (\text{HDL}) - (\text{Triglycerides}/5)$$

If the triglycerides are > 400 mg/dl and LDL-C levels cannot be calculated using the Friedewald equation, LDL-C levels should be entered as a value of 500 and the date of the test documented.

The following is not acceptable documentation of LDL-C test results:

1. LDL-to-HDL ratio
2. Patient self-reporting

Frequency: Most recent test result over the last 12 months from the last day of the reporting period.

Scoring: If [numerator/denominator] \leq minimum criteria, then Earned Points = [1 – (numerator/denominator)] x maximum available points for the measure

If [numerator/denominator] > minimum criteria, then Earned Points = 0

4. Lipid Superior Control:

Description: Percentage of patients aged 18 through 75 years with coronary artery disease (CAD) who had most recent LDL-C level in superior control (less than 100 mg/dl).

Data source: Electronic data (visit, lab, encounter data, or claims) and/or medical record data (paper-based or EHR). This measure requires the use of claims/encounter or medical record data for identification of patients with coronary artery disease (CAD) for the denominator, and laboratory or medical record data for LDL-C test information for the numerator.

Explanation: The American Heart Association (AHA) and American College of Cardiology (ACC) guidelines for the management of patients with coronary artery disease (CAD) recommends a lipid management target LDL-C < 100 mg/dl.

Numerator: Patients aged 18-75 years with a diagnosis of coronary artery disease (CAD) and most recent LDL-C level < 100 mg/dl. See “Patient Eligibility Criteria” for further information on codes to identify patients with CAD.

Electronic Collection: The patient is numerator compliant if the laboratory result of the most recent LDL-C test during the reporting period is < 100 mg/dl. The patient is NOT numerator compliant if the laboratory result of the most recent LDL-C test is ≥ 100 mg/dl, is missing, or if the test was not done during the reporting period.

Medical Record Collection: The patient is numerator compliant if the result of the most recent LDL-C test during the reporting period is < 100 mg/dl. The patient is NOT numerator compliant if the result of the most recent LDL-C test is ≥ 100 mg/dl, is missing, or if the test was not done during the reporting period.

At a minimum, documentation in the medical record must include a note indicating the date on which the LDL-C test was performed and the result. LDL-C levels may be calculated from total cholesterol, HDL-C and triglycerides using the Friedewald equation if the triglycerides are ≤ 400 mg/dl:

$$\text{LDL-C} = (\text{total cholesterol}) - (\text{HDL}) - (\text{Triglycerides}/5)$$

If the triglycerides are > 400 mg/dl and LDL-C levels cannot be calculated using the Friedewald equation, LDL-C levels should be entered as a value of 500 and the date of the test documented.

The following is not acceptable documentation of LDL-C test results:

1. LDL-to-HDL ratio
2. Patient self-reporting

Frequency: Most recent test result over the last 12 months from the last day of the reporting period.

Scoring: If [numerator/denominator] \geq minimum criteria, then Earned Points = [numerator/denominator] x maximum available points for the measure

If [numerator/denominator] $<$ minimum criteria, then Earned Points = 0

5. Evaluation of Activity Level and Anginal Symptoms:

Description: Percentage of patients aged 18 through 75 years with a diagnosis of coronary artery disease (CAD) who were evaluated for both level of activity and anginal symptoms.

Data source: Electronic data (visit, lab, encounter data, or claims) and/or medical record data (paper-based or EHR). This measure requires the use of claims/encounter or medical record data for identification of patients with coronary artery disease (CAD) for the denominator, and medical record data for activity level and anginal symptoms information for the numerator.

Explanation: The American Heart Association (AHA) and American College of Cardiology (ACC) guidelines for the management of patients with chronic stable angina recommend regular assessment of patients' anginal symptoms and levels of activity. It is anticipated that clinicians who provide services for the primary management of coronary artery disease (CAD) will submit this measure.

Numerator: Patients aged 18-75 years with a diagnosis of coronary artery disease (CAD) and documentation of evaluation for both level of activity and anginal symptoms. See "Patient Eligibility Criteria" for further information on codes to identify patients with CAD.

Medical Record Collection: A patient is numerator compliant if the medical record includes dated documentation of one of the following during the reporting period:

1. The patient's level of activity and anginal symptoms
2. Grading of the patient's angina using the Canadian cardiovascular society classification system
3. Patient completed symptom and/or activity questionnaire (e.g. Seattle Angina Questionnaire)

Frequency: Most recent result over the last 12 months from the last day of the reporting period.

Scoring: If [numerator/denominator] \geq minimum criteria, then Earned Points = [numerator/denominator] x maximum available points for the measure

If [numerator/denominator] $<$ minimum criteria, then Earned Points = 0

6. Smoking Status and Cessation Advice and Treatment:

Description: Percentage of patients aged 18 through 75 years with coronary artery disease (CAD) who have documentation of smoking status, and if a smoker, received cessation counseling or treatment.

Data source: Electronic data (visit, lab, encounter data, or claims) and/or medical record data (paper-based or EHR). This measure requires the use of claims/encounter pharmacy or medical record data for identification of patients with coronary artery disease (CAD) for the denominator, and medical record data for documentation of smoking status, and if a smoker, pharmacy or medical record data for documentation of cessation counseling or treatment information for the numerator.

Explanation: The American Heart Association (AHA) and American College of Cardiology (ACC) guidelines for the management of patients with coronary artery disease (CAD) recommend inquiring on patients' smoking status and smoking cessation and counseling intervention when applicable. It is anticipated that clinicians who provide services for the primary management of coronary artery disease (CAD) will submit this measure.

Numerator: Patients aged 18-75 years with a diagnosis of coronary artery disease (CAD) and documentation of smoking status, and if a smoker, date of cessation counseling or treatment. See "Patient Eligibility Criteria" for further information on codes to identify patients with CAD.

Electronic Collection: The patient is numerator compliant if he or she has smoking status documented (see Medical Record Collection below) AND if smoker, has documented date of receipt of cessation counseling and/or treatment during the reporting period, as identified by claims data. The following codes may be used to identify smoking cessation counseling and/or treatment:

CPT I Codes: 99406, 99407;

HCPCS Codes: S9075, S9453.

Medical Record Collection: The patient is numerator compliant if he or she has smoking status documented AND if a smoker, has documented date of receipt of cessation counseling and/or treatment during the reporting period. Acceptable forms of cessation counseling and treatment methods/resources include dated documentation of patient receiving/participating in at least one of the following:

1. 1:1 teaching

2. Written or web-based risk-based educational materials
3. Group education class focused on smoking cessation
4. Drug therapy

For a list of numerator compliant medications, see Table 3 under “Relevant Medications Lists for CAD Care Measurement Set.” The list is provided as an example, but does not constitute an exhaustive list of appropriate medications.

If the patient is a non-smoker, the patient is NOT numerator compliant if:

1. His or her smoking status documentation is missing
OR
2. His or her smoking status was not asked

If the patient is a smoker, the patient is NOT numerator compliant if:

1. His or her smoking status documentation is missing
OR
2. His or her smoking status was not asked
OR
3. His or her documentation on receiving cessation counseling and/or treatment is missing
OR
4. He or she has not received cessation counseling and/or treatment
OR
5. He or she has not received cessation counseling and/or treatment during the reporting period
OR
6. His or her documentation on receiving cessation counseling and/or treatment is not during the reporting period

Frequency: If non-smoker: most recent smoking status.

If smoker: most recent smoking status and counseling/treatment over the last 12 months from last day of the reporting period.

Scoring: Earned Points = [numerator/denominator] x maximum available points for the measure

7. Complete Lipid Profile:

Description: Percentage of patients aged 18 through 75 years with coronary artery disease (CAD) who had a full lipid profile completed.

Data source: Electronic data (visit, lab, encounter data, or claims) and/or medical record data (paper-based or EHR). This measure requires the use of claims/encounter or medical record data for identification of patients with coronary artery disease (CAD) for the denominator, and laboratory or medical record data for lipid profile information for the numerator.

Explanation: The American Heart Association (AHA) and American College of Cardiology (ACC) guidelines for the management of patients with coronary artery disease (CAD) recommend routine lipid profile which should include total cholesterol, high-density lipoprotein (HDL-C), low-density lipoprotein (LDL-C), and triglycerides. It is anticipated that clinicians who provide services for the primary management of coronary artery disease (CAD) will submit this measure.

Numerator: Patients aged 18-75 years with a diagnosis of coronary artery disease (CAD) and documentation of full lipid profile completed. A full lipid profile includes all of the following:

1. Total serum Cholesterol (TC)
2. Serum Triglycerides (TRIG)
3. High- Density Lipoprotein (HDL)
4. Low- Density Lipoprotein (LDL)

See “Patient Eligibility Criteria” for further information on codes to identify patients with CAD.

Electronic Collection: The patient is numerator compliant if he or she has laboratory documentation of the results of at least 3 of the 4 lipid profile components listed above during the reporting period. The patient is NOT numerator compliant if 2 or more of the lipid profile components are missing results or were not done during the reporting period.

Medical Record Collection: The patient is numerator compliant if he or she documentation of the results of at least 3 of the 4 lipid profile components listed above during the reporting period. The patient is NOT numerator compliant if 2 or more of the lipid profile components are missing results or were not done during the reporting period.

The following is not acceptable documentation for full lipid profile:

1. LDL-to-HDL ratio
2. Patient self-reporting

Frequency: Most recent test results over the last 12 months from the last day of the reporting period.

Scoring: Earned Points = [numerator/denominator] x maximum available points for the measure

8. LDL Drug Therapy:

Description: Percentage of patients aged 18 through 75 years old with coronary artery disease (CAD) and documented evidence of low density lipid (LDL) lowering therapy use, if not contraindicated.

Data source: Electronic data (visit, lab, encounter data, or claims) and/or medical record data (paper-based or EHR). This measure requires the use of claims/encounter or medical record data for identification of patients with coronary artery disease (CAD) for the denominator, and claims/encounter, pharmacy or medical record data for documentation of use of LDL-lowering medication(s) or contraindications for the numerator.

Explanation: The American Heart Association (AHA) and American College of Cardiology (ACC) guidelines for the management of patients with coronary artery disease (CAD) recommend that patients with a baseline LDL \geq 130 mg/dl be started on a cholesterol lowering drug, simultaneously with therapeutic lifestyle changes and control of non-lipid factors. It is anticipated that clinicians who provide services for the primary management of coronary artery disease (CAD) will submit this measure.

Numerator: Patients aged 18-75 years with a diagnosis of coronary artery disease (CAD) and documented evidence of LDL-lowering medication use, if not contraindicated. Three methods are provided to identify patients documented LDL-lowering medication use and/or contraindications: pharmacy, claims, and medical record data. See “Patient Eligibility Criteria” for further information on codes to identify patients with CAD.

Electronic Collection: The patient is numerator compliant if he or she has documented evidence of LDL-lowering medication(s) use or contraindication to LDL-lowering medications, as identified by pharmacy or claims data. This includes those patients with CAD who had one of the following:

1. LDL-lowering medication(s) dispensed during the reporting period.
2. Evidence of contraindication or previous adverse reaction to LDL-lowering therapy

LDL-lowering Medications: For a list of numerator compliant LDL-lowering medications, see Table 4 under “Relevant Medication Lists for CAD Care Measurement Set.” These lists are provided as an example, but do not constitute exhaustive lists of appropriate medications.

Evidence of Contraindication or Previous Adverse Reaction: The following codes may be used to identify contraindications to LDL-lowering medications:

ICD-9 Codes:

LDL-lowering therapy allergy or intolerance: 995.0 and E942.2, 995.1 and E942.2, 995.27 and E942.2, 995.29 and E942.2

Pregnancy: V22.0-V23.9

LOINC Codes WITH associated LDL < 130 mg/dl: 12773-8, 13457-7, 18262-6, 2089-1, 22748-8, 24331-1-1, 39469-2

CPT (C4) Codes WITH associated LDL < 130 mg/dl: 80061, 83700, 83701, 83704, 83721

Medical Record Collection: The patient is numerator compliant if he or she has documentation in the medical record of use of a LDL-lowering medication OR previous adverse reaction or contraindication to LDL-lowering medications. This includes those patients with coronary artery disease who had one of the following:

1. Documentation indicating the date on which a LDL-lowering medication was prescribed during the reporting period.
2. Documentation of a prescription for a LDL-lowering medication from another treating clinician during the reporting period.
3. Documentation of diagnosis of or medical treatment for one of the following indicating a previous adverse reaction or contraindication to use of LDL-lowering therapy:
 - LDL-lowering medication allergy or intolerance
 - Most recent LDL value (within the last 12 months from the last day of the reporting period) is < 130 mg/dl
 - Pregnancy

For a list of numerator compliant LDL-lowering medications, see Table 4 under “Relevant Medication Lists for CAD Care Measurement Set.” These lists are provided as an example, but do not constitute exhaustive lists of appropriate medications.

The following is not acceptable documentation for LDL-lowering medication use or contraindication:

1. Patient self-reporting

Frequency: Most recent documentation over the last 12 months from the last day of the reporting period.

Scoring: Earned Points = [numerator/denominator] x maximum available points for the measure

9. Use of Aspirin or Other Antiplatelet Therapy:

Description: Percentage of patients aged 18 through 75 years with coronary artery disease (CAD) who have documentation of use of aspirin or other antiplatelet therapy, if not contraindicated.

Data source: Electronic data (visit, lab, encounter data or claims) and/or medical record data (paper-based or EHR). This measure requires the use of claims or medical record data for identification of patients with coronary artery disease (CAD) for the denominator, and pharmacy or medical record data for documentation of use of aspirin or another antiplatelet for the numerator.

Explanation: The American Heart Association (AHA) and American College of Cardiology (ACC) guidelines for the management of patients with coronary artery disease (CAD) recommends antiplatelet therapy in the absence of contraindications. It is anticipated that clinicians who provide services for the primary management of coronary artery disease (CAD) will submit this measure.

Numerator: Patients aged 18-75 years with a diagnosis of coronary artery disease (CAD) and documentation of use of aspirin or another antiplatelet, if not contraindicated. Two methods are provided to identify patients with documented use of aspirin or another antiplatelet: pharmacy data or medical record data.

See “Patient Eligibility Criteria” for further information on codes to identify patients with CAD.

Electronic Collection: The patient is numerator compliant if pharmacy data documents he or she was dispensed aspirin (75 to 325 mg daily) or another antiplatelet during the reporting period, on an ambulatory basis.

Other antiplatelets include:

1. Clopidogrel (Plavix)
2. Dipyridamole (w/aspirin = Aggrenox)

For a list of numerator compliant aspirin medications and other antiplatelets, see Tables 5 and 6 under “Relevant Medication Lists for CAD Care Measurement Set.” These lists are provided as an example, but do not constitute exhaustive lists of appropriate medications.

Medical Record Collection: The patient is numerator compliant if he or she has documentation in the medical record of use of aspirin or another antiplatelet OR contraindication to aspirin or another antiplatelet. This includes those patients with coronary artery disease who had one of the following:

1. Documentation indicating the date on which aspirin or another antiplatelet was prescribed during the reporting period.
2. Documentation of a prescription for aspirin or another antiplatelet from another treating clinician during the reporting period.
3. Documentation of diagnosis of or medical treatment for one of the following in which use of aspirin or another antiplatelet is contraindicated:
 - Active peptic ulcer
 - History of recent¹¹ GI bleeding
 - History of intracranial hemorrhage (ICH)
 - Allergy or hypersensitivity to Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)
 - Bleeding disorders including hemophilia, von Willebrand's disease, thrombocytopenia and severe liver disease

Other antiplatelets include:

1. Clopidogrel (Plavix)
2. Dipyridamole (w/aspirin = Aggrenox)

For a list of numerator compliant aspirin medications and other antiplatelets, see Tables 5 and 6 under “Relevant Medication Lists for CAD Care Measurement Set.” These lists are provided as an example, but do not constitute exhaustive lists of appropriate medications.

The following is not acceptable documentation for aspirin or other antiplatelet therapy use:

1. Patient self-reporting

Frequency: If patient with diagnosis of or treatment for condition for which aspirin or another antiplatelet is contraindicated: during patient lifetime (unless more specific frequency is indicated above).

If patient with aspirin or antiplatelet use: most recent prescription over the last 12 months from the last day of the reporting period.

Scoring: If [numerator/denominator] ≥ minimum criteria, then Earned Points = [numerator/denominator] x maximum available points for the measure

¹¹ Over the last six months, from the last day of the reporting period.

If [numerator/denominator] < minimum criteria, then Earned Points = 0

10. ACE-I/ARB Therapy:

Description: Percentage of patients aged 18 through 75 years with coronary artery disease (CAD) and left ventricular systolic dysfunction (LVSD) who have documented evidence of angiotensin converting enzyme inhibitor (ACE-I) or angiotensin receptor blocker (ARB) therapy use, if not contraindicated.

Data source: Electronic data (visit, lab, encounter data, or claims) and/or medical record data (paper-based or EHR). This measure requires the use of claims/encounter or medical record data for identification of patients with coronary artery disease (CAD) and left ventricular systolic dysfunction (LVSD) for the denominator, and claims/encounter, pharmacy or medical record data for documentation of ACE-I or ARB medication(s) use for the numerator.

Explanation: The American Heart Association (AHA) and American College of Cardiology (ACC) guidelines for the management of patients with coronary artery disease (CAD) recommends that patients with left ventricular systolic dysfunction (LVSD) be started on an ACE-I or ARB in the absence of contraindications. It is anticipated that clinicians who provide services for the primary management of coronary artery disease (CAD) will submit this measure.

Numerator: Patients aged 18-75 years with a diagnosis of coronary artery disease (CAD) and left ventricular systolic dysfunction (LVSD) with documented evidence of ACE-I or ARB medication use, if not contraindicated. Three methods are provided to identify patients' documented ACE-I or ARB medication use: pharmacy, claims, and medical record data. See "Denominator Subset" section below for further information on identifying patients with CAD and LVSD.

Electronic Collection: The patient is numerator compliant if he or she has documented evidence of ACE-I or ARB medication(s) use or contraindication to ACE-I or ARB medications, as identified by pharmacy or claims data. This includes those patients with coronary artery disease and LVSD who had one of the following:

1. ACE-I or ARB medication(s) dispensed during the reporting period.
2. Evidence of contraindication or previous adverse reaction to ACE-I or ARB therapy

ACE-I/ARB Medications: For a list of numerator compliant ACE-I and ARB medications, see Tables 7 and 8 under "Relevant Medication Lists for CAD Care Measurement Set."

Evidence of Contraindication or Previous Adverse Reaction: The following codes may be used to identify contraindications to ACE-I and/or ARB medications:

ICD-9 Codes:

ACE-I or ARB therapy allergy or intolerance: 995.0 and E942.9, 995.1 and E942.9, 995.27 and E942.9, 995.29 and E942.9

Anuric renal failure: V56.0, V56.8, 39.95, 54.98, 788.5, 586, 403.01, 403.11, 403.91, 404.02, 404.03, 404.12, 404.13, 404.92, 404.93, 584.5-584.9, 585.5, 585.6)

Moderate or severe aortic stenosis: 440.1, 395.0, 396.0, 396.2, 396.8, 425.1, 747.22

Pregnancy: V22.0-V23.9

Medical Record Collection: The patient is numerator compliant if he or she has documentation in the medical record of use of ACE-I or ARB medication OR previous adverse reaction or contraindication to ACE-I or ARB medications. This includes those patients with coronary artery disease and LVSD who had one of the following:

1. Documentation indicating the date on which an ACE-I or ARB medication was prescribed during the reporting period.
2. Documentation of a prescription for an ACE-I or ARB medication from another treating clinician during the reporting period.
3. Documentation of diagnosis of or medical treatment for one of the following indicating a previous adverse reaction or contraindication to use of ACE-I and/or ARB therapy:
 - ACE-I or ARB medication allergy or intolerance
 - Anuric renal failure
 - Moderate or severe aortic stenosis
 - Pregnancy

For a list of numerator compliant ACE-I and ARB medications, see Tables 7 and 8 under “Relevant Medication Lists for CAD Care Measurement Set.” These lists are provided as an example, but do not constitute exhaustive lists of appropriate medications.

The following is not acceptable documentation:

1. Patient self-reporting

Denominator Subset: Patients aged 18-75 years with the domain denominator diagnosis (i.e coronary artery disease [CAD]) AND evidence of left ventricular systolic dysfunction (LVSD). LVSD is defined as a most recent left ventricular ejection fraction (LVEF) < 40% or documentation of moderately or severely depressed left ventricular systolic function. Information on the domain’s denominator diagnosis can be found under the “Patient Eligibility Criteria” section of the document.

Electronic Collection: Patient is denominator compliant if he or she has undergone left ventricular function (LVF) testing, as documented by administrative claims data AND documentation in the medical record of an ejection fraction < 40% or moderately or severely depressed left ventricular systolic function. Below is a list of eligible codes to identify left ventricular function (LVF) testing:

Left Ventricular Function (LVF) Testing

CPT-I Codes: 78414, 78468, 78472, 78473, 78480, 78481, 78483, 78494, 93303, 93304, 93307, 93308, 93312, 93314, 93315, 93317, 93350, 93543

Medical Record Collection: Patient is denominator compliant if he or she has documentation of one of the following on the problem list:

1. Left ventricular systolic dysfunction (LVSD)
2. Left ventricular ejection fraction (LVEF) < 40%
3. Moderate or severely depressed left ventricular systolic function

Frequency: Most recent documentation over the last 12 months from the last day of the reporting period.

Scoring: If denominator subset ≥ 25 patients, then:

If [numerator/denominator] \geq minimum criteria, then Earned Points = [numerator/denominator] x maximum available points for the measure

If [numerator/denominator] < minimum criteria, then Earned Points = 0

If denominator subset < 25 patients, then measure is not scored.

11. Persistent Beta Blocker Treatment After An Acute Myocardial Infarction (AMI):

Description: Percentage of patients aged 18 through 75 years old with coronary artery disease (CAD) and an acute myocardial infarction (AMI) in the past 6-18 months who have documented evidence of persistent beta blocker treatment, if not contraindicated.

Data source: Electronic data (visit, lab, encounter data, or claims) and/or medical record data (paper-based or EHR). This measure requires the use of claims/encounter or medical record data for identification of patients with coronary artery disease (CAD) with prior acute myocardial infarction (AMI) for the denominator, and claims/encounter, pharmacy or medical record data for documentation of days' supply of beta blocker(s) prescribed for the numerator.

Explanation: The American Heart Association (AHA) and American College of Cardiology (ACC) guidelines for the management of patients with coronary artery disease (CAD) and prior myocardial infarction recommends beta blocker therapy in the absence of contraindications. It is anticipated that clinicians who provide services for the primary management of coronary artery disease (CAD) will submit this measure.

Numerator: Patients aged 18-75 years with a diagnosis of coronary artery disease (CAD) and an acute myocardial infarction (AMI) in the past 6-18 months (look back starts 6 months from the last day of the reporting period and ends 18 months from the last day of the reporting period), with documented evidence of persistent beta blocker treatment in the past 180 days (from the last day of the reporting period), if not contraindicated. Three methods are provided to identify patients' documented days' supply of beta blocker(s): pharmacy, claims, and medical record data. See "Denominator Subset" section below for further information on identifying patients with CAD and AMI.

Electronic Collection: The patient is numerator compliant if he or she has documented evidence of beta blocker treatment or contraindication to beta blocker therapy, as identified by pharmacy or claims data. This includes those patients with coronary artery disease and AMI within the past 6-18 months who had one of the following:

1. ≥ 135 days' supply of beta blocker(s) dispensed in the past 180 days from the last day of the reporting period
2. Evidence of contraindication or previous adverse reaction to beta blocker therapy

Beta blocker treatment: Persistence of treatment for this measure is defined as at least 75% of the days' supply filled. For a list of numerator compliant beta

blockers see Table 9 under “Relevant Medication Lists for CAD Care Measurement Set.” These lists are provided as an example, but do not constitute exhaustive lists of appropriate medications.

Evidence of Contraindication or Previous Adverse Reaction: The following codes may be used to identify contraindications to beta blocker therapy:

ICD-9 Codes:

History of asthma: 493.00, 493.01, 493.02, 493.10, 493.11, 493.12, 493.80, 493.81, 493.82, 493.90, 493.91, 493.92

History of hypotension: 458.0, 458.1, 458.21, 29, 458.8, 458.9

History of heart block > 1 degree: 426.0, 426.12, 426.13, 426.2, 426.4, 426.50, 426.51, 426.52, 426.53, 426.54, 426.6, 426.7

History of sinus bradycardia: 427.81

History of Chronic Obstructive Pulmonary Disease (COPD): 491.20, 491.21, 491.22, 493.20, 493.21, 493.22, 496

Pharmacy data documenting a prescription for an inhaled corticosteroid during the reporting period may also be used to identify a contraindication to beta blocker therapy. For a list of inhaled corticosteroids, see Table 10 under “Relevant Medication Lists for CAD Care Measurement Set.” These lists are provided as an example, but do not constitute exhaustive lists of appropriate medications.

Medical Record Collection: The patient is numerator compliant if he or she has documentation in the medical record of use of beta blockers OR previous adverse reaction or contraindication to beta blocker therapy. This includes those patients with coronary artery disease and AMI within the past 6-18 months who had one of the following:

1. Documentation indicating the patient was dispensed \geq 135 days’ supply of beta blocker(s) in the past 180 days from the last day of the reporting period.
2. Documentation indicating the patient was dispensed \geq 135 days’ supply of beta blocker(s) from another treating clinician in the past 180 days from the last day of the reporting period.
3. Documentation of diagnosis of or medical treatment for one of the following indicating a previous adverse reaction or contraindication to use of beta blocker therapy:

- History of asthma or prescription for an inhaled corticosteroid over the past 12 months, from the last day of the reporting period
- History of hypotension
- History of heart block > 1 degree
- History of sinus bradycardia
- History of Chronic Obstructive Pulmonary Disease (COPD)
- History of Class IV Congestive Heart Failure (CHF)

For a list of numerator compliant beta blockers and inhaled corticosteroids, see Tables 9 and 10 under “Relevant Medication Lists for CAD Care Measurement Set.” These lists are provided as an example, but do not constitute exhaustive lists of appropriate medications.

The following is not acceptable documentation:

1. Patient self-reporting

Denominator Subset: Patients aged 18-75 years with the domain denominator diagnosis (i.e coronary artery disease [CAD]) AND diagnosis of an acute myocardial infarction (AMI) in the past 6-18 months (from the last day of the reporting period). Information on the domain’s denominator diagnosis can be found under the “Patient Eligibility Criteria” section of the document.

Electronic Collection: Patient is denominator compliant if he or she has had at least one acute myocardial infarction (AMI) event in the past 6-18 months, from the last day of the reporting period, as documented by administrative claims data. Below is a list of eligible codes to identify an acute myocardial infarction (AMI):

Acute Myocardial Infarction (AMI)

ICD-9 Codes: 410, 414.0, 410.00, 410.01, 410.02, 410.1, 410.10, 410.11, 410.12, 410.2, 410.20, 410.21, 410.22, 410.3, 410.30, 410.31, 410.32, 414, 410.40, 410.41, 410.42, 410.5, 410.50, 410.51, 410.52, 410.6, 410.60, 410.61, 410.62, 410.7, 410.70, 410.71, 410.72, 410.8, 410.80, 410.81, 410.82, 410.9, 410.90, 410.91, 410.92, 411, 411.0, 411.1

Medical Record Collection: Patient is denominator compliant if he or she has a diagnosis of acute myocardial infarction (AMI) listed on the problem list dated in the past 6-18 months, from the last day of the reporting period.

Frequency: Most recent documentation over the last 180 days from the last day of the reporting period.

Scoring: If denominator subset ≥ 25 patients, then:

If $[\text{numerator/denominator}] \geq \text{minimum criteria}$, then Earned Points =
 $[\text{numerator/denominator}] \times \text{maximum available points for the measure}$

If $[\text{numerator/denominator}] < \text{minimum criteria}$, then Earned Points = 0

If denominator subset < 25 patients, then measure is not scored.

12. Beta Blocker Treatment with a Prior Acute Myocardial Infarction (AMI):

Description: Percentage of patients aged 18 through 75 years old with coronary artery disease (CAD) and a prior acute myocardial infarction (AMI) who have documented evidence of beta blocker use, if not contraindicated.

Data source: Electronic data (visit, lab, encounter data, or claims) and/or medical record data (paper-based or EHR). This measure requires the use of claims/encounter or medical record data for identification of patients with coronary artery disease (CAD) with prior acute myocardial infarction (AMI) for the denominator, and claims/encounter, pharmacy or medical record data for documentation of beta blocker(s) use for the numerator.

Explanation: The American Heart Association (AHA) and American College of Cardiology (ACC) guidelines for the management of patients with coronary artery disease (CAD) and prior myocardial infarction recommends beta blocker therapy in the absence of contraindications. It is anticipated that clinicians who provide services for the primary management of coronary artery disease (CAD) will submit this measure.

Numerator: Patients aged 18-75 years with a diagnosis of coronary artery disease (CAD) and a prior acute myocardial infarction (AMI) with documented evidence of beta blocker treatment use, if not contraindicated. Three methods are provided to identify patients' documented beta blocker use: pharmacy, claims, and medical record data. See "Denominator Subset" section below for further information on identifying patients with CAD and AMI.

Electronic Collection: The patient is numerator compliant if he or she has documented evidence of beta blocker treatment or contraindication to beta blocker therapy, as identified by pharmacy or claims data. This includes those patients with coronary artery disease and a prior AMI who had one of the following:

1. Beta blocker(s) dispensed during the reporting period
2. Evidence of contraindication or previous adverse reaction to beta blocker therapy

Beta blocker treatment: For a list of numerator compliant beta blockers see Table 9 under "Relevant Medication Lists for CAD Care Measurement Set." These lists are provided as an example, but do not constitute exhaustive lists of appropriate medications.

Evidence of Contraindication or Previous Adverse Reaction: The following codes may be used to identify contraindications to beta blocker therapy:

ICD-9 Codes:

History of asthma: 493.00, 493.01, 493.02, 493.10, 493.11, 493.12, 493.80, 493.81, 493.82, 493.90, 493.91, 493.92

History of hypotension: 458.0, 458.1, 458.21, 29, 458.8, 458.9

History of heart block > 1 degree: 426.0, 426.12, 426.13, 426.2, 426.4, 426.50, 426.51, 426.52, 426.53, 426.54, 426.6, 426.7

History of sinus bradycardia: 427.81

History of Chronic Obstructive Pulmonary Disease (COPD): 491.20, 491.21, 491.22, 493.20, 493.21, 493.22, 496

Pharmacy data documenting a prescription for an inhaled corticosteroid during the reporting period may also be used to identify a contraindication to beta blocker therapy. For a list of inhaled corticosteroids, see Table 10 under “Relevant Medication Lists for CAD Care Measurement Set.” These lists are provided as an example, but do not constitute exhaustive lists of appropriate medications.

Medical Record Collection: Patient is numerator compliant if he or she has documentation in the medical record of use of beta blockers OR previous adverse reaction or contraindication to beta blocker therapy. This includes those patients with coronary artery disease and a prior AMI who had one of the following:

1. Documentation indicating the date on which a beta blocker was prescribed during the reporting period.
2. Documentation of a prescription for a beta blocker from another treating clinician during the reporting period.
3. Documentation of diagnosis of or medical treatment for one of the following indicating a previous adverse reaction or contraindication to use of beta blocker therapy:
 - History of asthma or prescription for an inhaled corticosteroid over the past 12 months, from the last day of the reporting period
 - History of hypotension
 - History of heart block > 1 degree
 - History of sinus bradycardia
 - History of Chronic Obstructive Pulmonary Disease (COPD)

- History of Class IV Congestive Heart Failure (CHF)

For a list of numerator compliant beta blockers and inhaled corticosteroids, see Tables 9 and 10 under “Relevant Medication Lists for CAD Care Measurement Set.” These lists are provided as an example, but do not constitute exhaustive lists of appropriate medications.

The following is not acceptable documentation:

1. Patient self-reporting

Denominator Subset: Patients aged 18-75 years with the domain denominator diagnosis (i.e. coronary artery disease [CAD]) AND diagnosis of a prior acute myocardial infarction (AMI) at any time. Information on the domain’s denominator diagnosis can be found under the “Patient Eligibility Criteria” section of the document.

Electronic Collection: Patient is denominator compliant if he or she has had at least one prior acute myocardial infarction (AMI) at any time, as documented by administrative claims data. Below is a list of eligible codes to identify an acute myocardial infarction (AMI):

Acute Myocardial Infarction (AMI)

ICD-9 Codes: 410, 414.0, 410.00, 410.01, 410.02, 410.1, 410.10, 410.11, 410.12, 410.2, 410.20, 410.21, 410.22, 410.3, 410.30, 410.31, 410.32, 414, 410.40, 410.41, 410.42, 410.5, 410.50, 410.51, 410.52, 410.6, 410.60, 410.61, 410.62, 410.7, 410.70, 410.71, 410.72, 410.8, 410.80, 410.81, 410.82, 410.9, 410.90, 410.91, 410.92, 411, 411.0, 411.1

Medical Record Collection: Patient is denominator compliant if he or she has a diagnosis of acute myocardial infarction (AMI) listed on the problem list at any time.

Frequency: Most recent documentation over the last 12 months from the last day of the reporting period.

Scoring: If denominator subset \geq 25 patients, then:

If [numerator/denominator] \geq minimum criteria, then Earned Points = [numerator/denominator] x maximum available points for the measure

If [numerator/denominator] $<$ minimum criteria, then Earned Points = 0

If denominator subset $<$ 25 patients, then measure is not scored.

Patient Eligibility Criteria

An **eligible** coronary artery disease patient is one who meets **all three** criteria:

1. Is between 18 and 75 years of age.¹²
2. Has had a documented diagnosis of Coronary Artery Disease (CAD) (as defined in Table 1 below) for at least 12 months, from the last day of the reporting period. Eligible diagnosis categories exclude peripheral arterial disease (PAD), cerebrovascular disease (CVD) and diabetes.
3. Has been under the care of the applicant for at least 12 months. This is defined by documentation of two face-to-face visits for coronary artery disease (CAD) care between the clinician and the patient: one within 12 months of the last day of the reporting period and one that predates the last day of the reporting period by at least 12 months.

There are two accepted data sources that can be used to identify patients with coronary artery disease (CAD): claims/encounter data and medical record data.

Claims/Encounter data: Patient is denominator compliant if he or she is aged 18-75 and has had at least 2 face-to-face encounters for coronary artery disease (CAD) in an ambulatory setting: one within 12 months of the last day of the reporting period and one that predates the last day of the reporting period by at least 12 months. See Table 1 below for further information on codes to identify patients with coronary artery disease.

Also denominator compliant if the patient has documentation of being discharged alive for Anterior wall Myocardial Infarction (AMI), Coronary Artery Bypass Graft (CABG), or Percutaneous Transluminal Coronary Angioplasty (PTCA).

Medical Record data: Patient is denominator compliant if he or she is aged 18-75 with a documented diagnosis of coronary artery disease (CAD) listed on the problem list AND has been under the care of the applicant for at least 12 months. See Table 1 below for further information on diagnoses to identify patients with CAD.

Also denominator compliant if the patient has documentation of being discharged alive for Anterior wall Myocardial Infarction (AMI), Coronary Artery Bypass Graft (CABG), or Percutaneous Transluminal Coronary Angioplasty (PTCA).

Exclusions: Patients with a diagnosis of peripheral arterial disease (PAD), cerebrovascular disease (CVD) OR diabetes are excluded from the denominator. Patients in hospice or palliative care are also excluded from the denominator. See Table 2 below for further information on codes to identify patients with exclusions.

¹² As of the last date of the reporting period. Patients known to be deceased should be excluded.

Table 1: Codes to Identify a Patient with a Diagnosis of Coronary Artery Disease

Diagnosis Codes
<p>CORONARY ARTERY DISEASE</p> <p>Coronary Artery Disease ICD-9: 411, 411.0, 411.1, 411.8, 411.81, 411.89, 414, 414.0, 414.00, 414.01, 414.02, 414.03, 414.04, 414.05, 414.06, 414.07, 414.8, 414.9, V45.81, V45.82</p> <p>Acute Myocardial Infarction ICD-9: 410, 414.0, 410.00, 410.01, 410.02, 410.1, 410.10, 410.11, 410.12, 410.2, 410.20, 410.21, 410.22, 410.3, 410.30, 410.31, 410.32, 414, 410.40, 410.41, 410.42, 410.5, 410.50, 410.51, 410.52, 410.6, 410.60, 410.61, 410.62, 410.7, 410.70, 410.71, 410.72, 410.8, 410.80, 410.81, 410.82, 410.9, 410.90, 410.91, 410.92, 411, 411.0, 411.1.</p> <p>Stable Angina ICD-9: 413, 413.0, 413.1, 413.9</p> <p>Percutaneous Coronary Intervention CPT: 92980-92981, 92982, 92984, 92995, 92996, 92997, 92998, 33140 ICD-9: 36.06, 36.07, 36.09</p> <p>CABG CPT: 33510-33514, 33516-33519, 33521-33523, 33533-33536, 33542, 33545, 33572, 35600, 35601, 35606, 35612, 35616, 35621, 35623, 35626, 35631-35634, 35636-35638, 35642, 35645, 35646, 35647, 35650, 35651, 35654, 35656, 35661, 35663, 35665, 35666, 35671, 35501, 35506, 35508-35512, 35515, 35516, 35518, 35521-35523, 35525, 35526, 35531, 35533, 35535-35540, 35548, 35549, 35551, 35556, 35558, 35560, 35563, 35565, 35566, 35570, 35571 ICD-9: 36.1, 36.2</p>

Table 2: Codes/Notations to Identify Patients with Exclusions

Diagnosis Codes / Notations
<p>PERIPHERAL ARTERIAL DISEASE</p> <p>Lower Extremity Arterial Disease/Peripheral Arterial Disease ICD-9: 440.20-440.24, 440.29, 447.0-447.6, 447.8, 447.9, 444-444.2, 444.8-444.9</p> <p>CEREBROVASCULAR DISEASE</p> <p>Ischemia ICD-9: 435, 435.0, 435.1, 435.3, 435.8, 435.9</p> <p>Stroke ICD-9: 437.0-437.9, 438.0-438.2, 438.10-438.12, 438.20, 438.21, 438.22, 438.3, 438.30-438.32, 438.4, 438.40-438.42, 438.6-438.8, 438.81-438.85, 438.89, 438.9</p> <p>Atheroembolism ICD-9: 444.0, 444.1, 445.0, 445.8, 445.01, 445.02, 445.81, 445.89</p>

DIABETES¹³

Diabetes Mellitus

ICD-9: 250, 648.0

Notation of: Prescribed insulin¹⁴, Oral hypoglycemics/anti-hyperglycemics¹⁵

Diabetic Polyneuropathy

ICD-9: 357.2

Diabetic Retinopathy

ICD-9: 362.0

Diabetic Cataract

ICD-9: 366.41

Hospice and Palliative Care

ICD-9: V66.7

CPT: 99377, 99378

¹³ Diabetes codes are stated to the minimum specificity required. For example, if a three-digit code is listed, it is valid as a three-, four- or five-digit code.

¹⁴ Any mention of routine insulin use during the past 12 months. Includes : Any insulin, including regular insulin, insulin pump, insulin pen, 70/30, CSII (continuous subcutaneous infusion of insulin), Humalog, Humulin, Lente, Lispro, MDI (multiple daily injections), Novolin, Novolin Penfill, NPH Novo Nordisk, Semilente, Ultralente, Velosulin (Note: Insulin given only during hospitalization, or briefly to help a patient through an acute illness, such as with steroid treatment or active infection does not constitute documentation of insulin use for diabetes)

¹⁵ Any mention of oral hypoglycemic or antihyper-glycemic use during the past 12 months in the medical record. Includes: Acarbose, Acetohexamide, Amaryl, Chlorpropamide, Diabeta, Diabinase, Dymelor, Glipizide, Glipizide XL, Glucamide, Glucophage, Glucotrol, Glucotrol XL, Glyburide, Glynase, Metformin, Micronase, Orinase, Orimide, Prandin (Repaglinide), Precose, Tolazamide, Tolamide, Tolbutamide, Tolinase, Troglitazone

Relevant Medication Lists for CAD Care Measurement Set

Table 3: Smoking Cessation medications

Buproban Oral	Habitrol (TD)	Nicotine TD	NTS Step 1 TD
Bupropion SR	INTS Step 3 TD	Nicotine Transdermal TD	NTS Step 2 TD
Brupopion XL	Medic Nicotine TD	Nicotrol (PDR)	NTS Step 3 TD
Chantix (varenicline)	NicoDerm CQ	Nicotrol Inhaler (PDR)	Prostep TD
CVS NTS Step 1 TD	Nicoderm CQ TD	Nicotrol NS (PDR)	Wellbutrin
CVS NTS Step 2 TD	Nicoderm TD	Nicotrol NS Nasl	Zyban (PDR)
CVS NTS Step 3 TD	Nicotine Nasl	Nicotrol TD	Zyban Oral
Habitrol (PDR)	Nicotine Patches (PDR)	Nicotrol Td TD	

Table 4: Lipid Lowering Medications

Abitrate	Ezetimibe	Niacin ER	Pravachol
Advicor	Fenofibrate	Niacin ER Starter Pack	Pravastatin
Altacor	Fluvastatin	Niacin Extended Release	Pravastatin-aspirin
Atorvastatin	Gemcor	Niacin SR	Prevalite
Atromid-S	Gemfibrozil	Niacin TD	Prevalite Powder
B-3-50	Lescol	Niacin TR	Probucol
B3-500-Gr	Lescol XL	Niacor	Questran
Cholestyramine	Lipitor	Niacor B3	Questran Light
Cholestyramine Light	Locholest	Niaspan	Simvastatin
Choloxin	Locholest Light	Niaspan ER	Slo-Niacin
Clofibrate	Lofibra	Niaspan ER Starter Pack	Tricor
Colesevelam	Lopid	Nico-400	Welchol
Colestid	Lorelco	Nicobid Tempules	Zetia
Colestid Flavored	Lovastatin	Nicolar	Zocor
Colestipol	Mevacor	Nicotinex	
Dextrothyroxine Sodium	Niacin	Nicotinic Acid	

Table 5: Aspirin Family Medications

Acetylsalicylic Acid	Aspirbuf	Buffered ASA	Excedrin Geltab
Acuprin 81	Aspircaf	Buffered Aspirin	Excedrin Migraine
Alka-Seltzer	Aspirtab	Buffered Baby ASA	Extra Strength Bayer
Alka-Seltzer Morning Relief	Aspirin Baby	Bufferin	Fiorinal
Anacin	Aspirin Bayer	Bufferin Arthritis Strength	Fiormor
Arthritis Foundation Aspirin	Aspirin Bayer Children's	Bufferin Extra Strength	Fiortal
Arthritis Pain Ascriptin	Aspirin Buffered	Buffex	Fortabs
Arthritis Pain Formula	Aspirin Child	Cama Arthritis-Reliever	Genacote
ASA	Aspirin Child Chewable	Child's Aspirin	Genprin
ASA Baby	Aspirin Children's	Coated Aspirin	Halfprin
ASA Baby Chewable	Aspirin EC	Cosprin	Litecoat Aspirin
ASA Baby Coated	Aspirin Enteric Coated	CTD Aspirin	Low Dose ASA
ASA Bayer	Aspirin Litecoat	Dasprin	Magnaprin
ASA Bayer Children's	Aspirin Lo-Dose	Doans Pills	Med Aspirin
ASA Buffered	Aspirin Low Strength	Easprin	Norwich Aspirin
ASA Children's	Aspirin Tri-Buffered	EC ASA	Pain Relief (Effervescent)
ASA EC	Aspirin, Extended Release	Ecotrin	Pain Relief with Aspirin
ASA Enteric Coated	Aspirin/Butalbital/ Caffeine	Ecotrin Low Strength Adult	Sloprin
ASA/Maalox	Aspirin-Caffeine	Effervescent Pain & Antacid	St. Joseph Aspirin
Ascriptin	Aspirin-pravastatin	Empirin	Stanback Analgesic
Aspergum	Bayer Aspirin	Encaprin	Therapy Bayer
Aspir-10	Bayer Aspirin PM Extra Strength	Entab	Tri Buffered Aspirin
Aspir-Low	Bayer Children's	Entaprin	Uni-As
Aspir-Lox	Bayer EC	Entericote	Uni-Buffer
Aspir-Mox	Bayer Enteric Coated	Enteric Coated Aspirin	Uni-Tren
Aspir-Trin	Bayer Low Strength	Enteric Coated Baby Aspirin	Zorprin
	Bayer Plus	Excedrin	

Table 6: Non-aspirin Antiplatelet Medications

Aggrenox	Persantine
Clopidogrel	Plavix
Clopidogrel Bisulfate	Ticlid
Dipyridamole	Ticlopidine
Effient	Ticlopidine Hydrochloride

Table 7: ACE-I Medications

Accupril	Captopril/hydrochlorothiazide	Mavik	Quinapril Hydrochloride/ hydrochlorothiazide
Accuretic	Enalapril	Moexipril	Quinapril/hydrochlorothiazide
Aceon	Enalapril Maleate/diltiazem	Moexipril Hydrochloride	Ramipril
Altace	Enalapril Maleate/hydrochlorothiazide	Moexipril Hydrochloride/ hydrochlorothiazide	Tarka
Benazepril	Enalapril/diltiazem	hydrochlorothiazide	Teczem
Benazepril Hydrochloride	Enalapril/felodipine	Moexipril/hydrochlorothiazide	Trandolapril
Benazepril/amlodipine	Enalapril/hydrochlorothiazide	Monopril	Trandolapril/verapamil
Benazepril/hydrochlorothiazide	Enalaprilat	Monopril HCT	Trandolapril/verapamil hydrochloride
Capoten	Fosinopril	Monopril HCT 10/12.5	Uniretic
Capozide	Fosinopril Sodium/hydrochlorothiazide	Perindopril	Univasc
Capozide 25/15	Lexxel	Perindopril erbumine (added 12/10/04)	Vaseretic
Capozide 25/25	Lisinopril	Prinivil	Vasotec
Capozide 50/15	Lisinopril/hydrochlorothiazide	Prinzide	Zestoretic
Capozide 50/25	Lotensin	Quinapril	Zestril
Captopril	Lotensin HCT	Quinapril HCl	
Captopril HCT	Lotrel	Quinapril HCl/HCT	

Table 8: Angiotensin II inhibitors/angiotensin receptor blockers (ARBs)

Atacand	Cozaar	Irbesartan	Olmesartan/hydrochlorothiazide (added 12/10/04)
Atacand HCT	Diovan	Irbesartan/hydrochlorothiazide	Tasosartan
Avalide	Diovan HCT	Losartan	Telmisartan
Avapro	Eprosartan	Losartan/hydrochlorothiazide	Telmisartan/ hydrochlorothiazide
Benicar	Eprosartan/ hydrochlorothiazide	Micardis	Teveten
Candesartan	Hydrochlorothiazideolmesartan	Micardis HCT	Teveten HCT
Candesartan/ hydrochlorothiazide	Hyzaar	Olmesartan	Valsartan
			Valsartan/hydrochlorothiazide
			Verdia (added 12/10/04)

Table 9: Beta Blocker Medications

Acebutolol	Corgard	Metoprolol/hydrochlorothiazide	Sotalol HCl
Atenolol	Corzide 40/5	Metoprolol Tartrate/	Tenoretic
Atenolol/chlorthalidone	Corzide 80/5	hydrochlorothiazide	Tenormin
Betapace	Esmolol	Nadolol	Tenormin I.V.
Betapace AF	Inderal	Nadolol/ bendroflumethiazide	Timolide
Betaxolol	Inderal LA	Normodyne	Timolol
Bisoprolol	Inderide	Penbutolol	Timolol Maleate/ hydrochlorothiazide
Bisoprolol/fumarate	Inderide LA	Pindolol	Timolol/ hydrochlorothiazide
Bisoprolol/hydrochlorothiazide	Kerlone	Propranolol	Toprol
Blocadren	Labetalol	Propranolol HCl	Toprol-XL
Brevibloc	Levatol	Propranolol hydrochloride	Trandate
Carteolol	Lopressor	Propranolol/hydrochlorothiazide	Trandate HCl
Cartrol	Lopressor HCT	Sectral	Visken
Carvedilol	Lopressor/hydrochlorothiazide	Sorine	Zebeta
Coreg	Metoprolol	Sotalol	Ziac

Table 10: Inhaled Corticosteroids

Advair	Azmacort	Flovent Rotadisk	Qvar
Aerobid	Beclovent	Pulmicort	Vanceril
Aerobid-M	Flovent	Pulmicort Respules	Vanceril DS
Asmanex Twisthaler			

Minimum Patient Requirements

Applicants must abide by the minimum patient panel requirements as outlined below. Clinicians must elect and inform their data aggregator whether they are applying as an individual clinician or a medical practice. Clinicians are prohibited from applying as both individuals and part of a practice.

Individual clinician applicants: Individual clinician applicants must submit data on a minimum of 25 different eligible patients with coronary artery disease.

Medical practice applicants: For practice level applicants, the total number of coronary artery disease patients submitted must include:

- A minimum of 10 coronary artery disease patients per individual clinician
- A minimum practice average of 25 coronary artery disease patients per clinician

Example 1: Medical Practice A

- Clinician 1 has 25 eligible patients.
- Clinician 2 has 55 eligible patients.
- Clinician 3 has 10 eligible patients.
- Total number of eligible patients for Medical Practice A is 90.
- Practice average per clinician for Medical Practice A is 30.

Each clinician in Medical Practice A meets the individual minimum of 10 coronary artery disease patients. Medical Practice A also meets the minimum practice average of 25 coronary artery disease patients per clinician.

Example 2: Medical Practice B

- Clinician 1 has 25 eligible patients.
- Clinician 2 has 30 eligible patients.
- Clinician 3 has 7 eligible patients.
- Clinician 4 has 26 eligible patients.
- Total number of eligible patients for Medical Practice B is 88.
- Practice average per clinician for Medical Practice B is 22.

Clinician 3 in Medical Practice B does not meet the individual minimum of 10 coronary artery disease patients. Additionally, Medical Practice B does not meet the minimum practice average of 25 coronary artery disease patients per clinician. Clinician 3 and his or her patients will be removed from the assessment and the remaining clinicians (Clinicians 1, 2 and 4) will be scored as a practice, since they now have a practice average per clinician of 27 coronary artery disease patients.

Example 3: Medical Practice C

- Clinician 1 has 25 eligible patients.
- Clinician 2 has 55 eligible patients.
- Clinician 3 has 7 eligible patients.
- Total number of eligible patients for Practice C is 87.
- Practice average per clinician for Practice C is 29.

Clinician 3 does not meet the individual minimum of 10 eligible patients for practice level assessment. Since there are only 2 remaining eligible clinicians in this practice they will be scored as individuals. Each remaining clinician (Clinician 1 and Clinician 2) meets the individual clinician applicant minimum of 25 patients. Clinicians 1 and 2 can proceed with assessment as individuals.

APPENDICES

Appendix A: Audit Methodology

The PAO is responsible for conducting three levels of audit pertaining to applicant submissions for BTE CAD Care Recognition:

- Level 1: Data Aggregator (DA) Data Extraction code review
- Level 2: Data Validation (Load Summary)
- Level 3: Clinician Chart Audit

Level 1 Audit – Data Aggregator Data Extraction

The PAO will conduct an audit of each data aggregator’s CAD Care data extraction process prior to accepting applications. The PAO will review the code that the data aggregator is using to extract the clinician data and verify that all eligible patients are accurately included in the denominator. The DA must also provide the PAO with documentation of the code or logic used to extract numerator data to ensure that all data submitted is in accordance with BTE’s measure specifications. Each data aggregator needs to pass the extraction audit before numerator data is abstracted for submission to the PAO. This level of review will also be conducted biannually and upon any changes to the data aggregator data extraction code. Data aggregators are responsible for informing the PAO when any changes are made.

Data aggregators are required to supply the PAO with the following information in order for the PAO to certify the denominators and numerator data submitted by the data aggregator:

- Patient lists produced by following the clinical measures specifications and patient eligibility requirements outlined in this document
- Source code used to produce denominator lists
- Patient attribution methodology documentation
- Exclusion criteria
- Source code used to extract numerator data for each CAD Care measure

Level 2 Audit – Data Validation (Load Summary)

The PAO runs and provides the data aggregator with a file load summary for each file submission within 3 days of receipt of the file, ensuring that each data field contains a valid data value that meets the data field specifications and makes sense in relation to itself and related data fields. The load summary will identify which records contain incomplete or invalid data values and designate them as errors or warnings. There is a zero tolerance policy for errors on required

data fields and data values that do not meet data field specifications. It is the data aggregator’s responsibility to correct or remove the problematic data identified as errors and resubmit the file to the PAO. Files will not be rejected for invalid data values in clinical measures fields, but will be counted as a numerator miss for scoring purposes (with the exception of the poor control measures for which it will be counted as a numerator hit). Invalid data values in clinical measures fields are however identified as warnings in the load summary to the data aggregator, which is responsible for reporting this information back to the applicant in order to improve data collection.

The following data validation checks are used in creating the load summary provided to the data aggregator after each data file submission to identify any missing or invalid data values:

Data Validation Checks for Clinical Measures Data Fields			
Data field	Data field specifications	Acceptable Data Value Range	Notes
Resp. Clinician ID	(Required Field) Alphanumeric value up to 26 characters in length		
Chart ID	(Required Field) Alphanumeric value		
Last Visit Date	(Required Field) Numeric value: MM/DD/YYYY	01-12/01-31/2000-Current Year <i>Date submitted is INVALID if it is a future date based on the last day of the reporting period.</i>	
Patient Year/Date of Birth	(Required Field) Numeric value: YYYY or MM/DD/YYYY	(Current Year/Date -75 years) - (Current Year/Date -18 years)	Current year/date anchored to the last day of the reporting period
Systolic Blood Pressure	Numeric value	60-300 Data submitted is INVALID if: Systolic Blood Pressure < Diastolic Blood Pressure	
Diastolic Blood Pressure	Numeric value	40-150 <i>Data submitted is INVALID if: Diastolic Blood Pressure ≥ Systolic Blood Pressure</i>	
Blood Pressure Date	Numeric value: MM/DD/YYYY	01-12/01-31/2000-Current Year <i>Date submitted is INVALID if it is a future date based on the last day of the reporting period.</i>	
Smoking Status	Alpha value	“SMOKER”, “NON-SMOKER”, “NOT KNOWN”	
Smoking Status Assessment Date	Numeric value: MM/DD/YYYY	01-12/01-31/2000-Current Year <i>Date submitted is INVALID if it is a future date based on the last day of the reporting period</i>	

Smoking Cessation and/or Treatment Date	Numeric value: MM/DD/YYYY	01-12/01-31/2000-Current Year <i>Date submitted is INVALID if it is a future date based on the last day of the reporting period.</i>	
LDL Level (mg/dl)	Numeric value	15-500	
LDL Level Date	Numeric value: MM/DD/YYYY	01-12/01-31/2000-Current Year <i>Date submitted is INVALID if it is a future date based on the last day of the reporting period.</i>	
HDL Level (mg/dl)	Numeric value		
HDL Level Date	Numeric value: MM/DD/YYYY	01-12/01-31/2000-Current Year <i>Date submitted is INVALID if it is a future date based on the last day of the reporting period.</i>	
Triglyceride Level (mg/dl)	Numeric value		
Triglyceride Level Date	Numeric value: MM/DD/YYYY	01-12/01-31/2000-Current Year <i>Date submitted is INVALID if it is a future date based on the last day of the reporting period.</i>	
Total Cholesterol Level (mg/dl)	Numeric value		
Total Cholesterol Level Date	Numeric value: MM/DD/YYYY	01-12/01-31/2000-Current Year <i>Date submitted is INVALID if it is a future date based on the last day of the reporting period.</i>	
Aspirin Use Date	Numeric value: MM/DD/YYYY	01-12/01-31/2000-Current Year <i>Date submitted is INVALID if it is a future date based on the last day of the reporting period.</i>	
Antiplatelet Use Date	Numeric value: MM/DD/YYYY	01-12/01-31/2000-Current Year <i>Date submitted is INVALID if it is a future date based on the last day of the reporting period.</i>	
Aspirin/AntiplateletContraindications	Alpha value	“YES”, “NO”	
Level of Activity and Anginal Symptoms Date	Numeric value: MM/DD/YYYY	01-12/01-31/2000-Current Year <i>Date submitted is INVALID if it is a future date based on the last day of the reporting period.</i>	
LDL Therapy Date	Numeric value: MM/DD/YYYY	01-12/01-31/2000-Current Year <i>Date submitted is INVALID if it is a future date based upon on the last day of the reporting period.</i>	
LDL Therapy Contraindications	Alpha value	“YES”, “NO”	
LVSD Diagnosis	Alpha value	“YES”, “NO”	
ACE-Inhibitor Therapy Date	Numeric value: MM/DD/YYYY	01-12/01-31/2000-Current Year <i>Date submitted is INVALID if it is a future date based on the last day of</i>	

		<i>the reporting period.</i>	
ACE Inhibitor Therapy Contraindications	Alpha value	“YES”, “NO”	
ARB Therapy Date	Numeric value: MM/DD/YYYY	01-12/01-31/2000-Current Year <i>Date submitted is INVALID if it is a future date based on the last day of the reporting period.</i>	
ARB Therapy Contraindications	Alpha value	“YES”, “NO”	
Acute Myocardial Infarction (AMI) Date	Numeric value: MM/DD/YYYY	01-12/01-31/1934-Current Year <i>Date submitted is INVALID if it is a future date based on the last day of the reporting period.</i>	
Beta Blocker Therapy Date	Numeric value: MM/DD/YYYY	01-12/01-31/2000-Current Year <i>Date submitted is INVALID if it is a future date based on the last day of the reporting period.</i>	
Beta Blocker Therapy Contraindications	Alpha value	“YES”, “NO”	

Data Validation Checks for Clinician Identifier Data Fields			
Data field	Data field specifications	Acceptable Data Value Range	Notes
Resp. Clinician ID	(Required field) Alphanumeric value up to 26 characters in length		
NPI	(Required Field) NPI: Numeric value 10 characters in length		
DEA Number	Alphanumeric value 9 characters in length	First letter must be “A”, “B”, “F” or “M”.	
Medical License Number	Alphanumeric value up to 10 characters in length		
Clinician Last Name	(Required field) Alpha value up to 50 characters in length		Leading abbreviations like “DR” or “Dr” must be dropped. Generational suffixes (e.g., Sr, Jr, II, III, etc.) should be included in the Last Name field without any punctuation. Suffix should be separated from the last name by a blank (e.g., Smith Jr).
Clinician First Name	(Required field) Alpha value up to 50 characters in length		
Clinician Middle Name	Alpha value up to 30 characters in length		

Clinician Degree	(Required field) Numeric value	“01”, “02”, “03”, “04	01 = M.D. 02 = D.O. 03 = N.P. 04 = P.A.
Clinician/ Practice Address 1	(Required field) Alphanumeric value up to 100 characters in length		Should include the street name and number only.
Clinician/ Practice Address 2	Alphanumeric value up to 100 characters in length		Should include additional information such as suite, room, floor, building, etc.
Clinician/ Practice City	(Required field) Alpha value up to 100 characters in length		
Clinician/ Practice State	(Required field) Alpha value 2 characters in length	U.S. Postal Service abbreviation representing the state of the physician’s or practice’s address	
Clinician/ Practice Zip Code	(Required field) Numeric value 5 (#####), 9 (#####) or 10 characters (#####-####) in length		
Clinician/ Practice Phone	Alphanumeric value up to 30 characters in length		Area code is required. Telephone number may be entered with or without punctuation.
Clinician Date of Birth	Numeric value: MM/DD/YYYY		
Clinician Gender	Alpha value	“F”, “M”, “U”	F = Female M = Male U = Unknown
Clinician Specialty	Numeric value	01-29	01 = Allergy/Immunology 02 = Cardiology 03 = Critical Care Services 04 = Dermatology 05 = Endocrinology 06 = Gastroenterology 07 = Gen/Fam Practice 08 = Geriatric Medicine 09 = Hematology 10 = Infectious Disease 11 = Internal Medicine 12 = Nephrology 13 = Neurology 14 = Neurosurgery 15 = Obstetrics/Gynecology 16 = Occ. Medicine 17 = Oncology 18 = Ophthalmology 19 = Orthopedics 20 = Otolaryngology

			21 = Pediatrics 22 = Phys/Rehab Medicine 23 = Psychiatry 24 = Psychopharmacology 25 = Pulmonary Medicine 26 = Rheumatology 27 = Surgery 28 = Urology 29 = Other – not listed
Practice ID	<i>(Required field for practice applicants only)</i> Alphanumeric value up to 26 characters in length		
Practice Name	<i>(Required field for practice applicants only)</i> Alpha value up to 100 characters in length		
Data Submission through CCHIT/ Meaningful Use certified System	Alpha value	“Y”, “N”	Y = Yes N = No Blank fields will default to “N”.
Full Patient Panel	Alpha value	“Y”, “N”	Y = Yes N = No Blank fields will default to “N”.

Level 3 Audit – Clinician Chart

BTE reserves the right to complete an audit of any individual or practice application for recognition. PAOs or specified local organization subcontractors conduct audits of at least 5 percent of applicants from each data aggregator partner each year. CAD Care audits may be completed by fax, mail, electronically or on site, as determined by the PAO. Any data identified by the PAO as irregular through a pre-determined list of chart audit triggers is subject to audit. The remainder of the 5 percent is selected through a random sampling methodology. Once selected for an audit, an applicant submitting data continuously cannot be reselected for a subsequent audit through the random sampling methodology for a period of at least one year.

The PAO will notify the data aggregator which will notify the applicant if their application is chosen for audit, ascertain that audit personnel have no conflict of interest with the audited organization and provide instructions on audit requirements. Obtaining final Recognition results takes longer than usual for applicants chosen for audit. For those applicants selected for audit, final Recognition determination will be made within 60 days of the date of data submission.

The following chart identifies the components of the clinician chart audit depending on the data source of the patient information (whether the information is housed in an electronic medical record (EMR)/electronic health record (EHR), patient registry or paper chart).

<i>Patient data source / Audit Component</i>	<i>EMR/EHR</i>	<i>Registry</i>	<i>Paper Chart</i>
1. Verification of data submitted in comparison to data in patient chart	Y	Y	Y
2. Verification of patient selection for entry in electronic system (denominator certification)	N	Y	Y

For each applicant selected for audit, the PAO will identify and notify the data aggregator of 25 charts selected for review. For those clinicians chosen for audit due to an audit trigger, the patient charts containing the irregular data identified are included in the review. For all other audits the patient charts are identified through a random sampling methodology.

The auditor reviews all data fields submitted to the PAO in the clinical measures data file for each patient chart selected. The auditor is required to audit all the way through the 25 charts regardless of early findings to determine the final audit score. Errors are counted at the data field level. Applicants with 85 percent or greater accuracy on the audit will receive a Pass for the audit, and final recognition status will be determined. Failure to pass an audit results in no further consideration for the CAD Care Recognition program for a pre-determined period of time from the date of submission of the application. Applicants with an audit score of 50 to 84 percent will be prohibited from resubmitting data to a PAO for a period of six months. Applicants with an audit score less than 50 will be prohibited from resubmitting data to a PAO for assessment for a period of two years.

Audit Score	Audit Determiniation	Lockout from Reconsideration
85-100	Pass	None
50-84	Fail	6 months
0-49	Fail	2 years

Applicants with an audit determination of “Fail” are automatically subject to re-audit upon their next data submission to any PAO after the completion of the lockout period. All audit decisions are considered final.

Detailed audit processes and procedures will be provided to data aggregators and selected applicants by the PAO.

Appendix B: Sample Results Report

COLOR KEY

Yellow = Those values which are numerator compliant for the poor control discrete measures OR Patient numerator compliant for poor control composite measure

Sky Blue = Those values which are numerator compliant for the superior control discrete measures OR Patient numerator compliant for superior control composite measure

Light Orange = Those values which are numerator compliant for each of the process measures

BTE Coronary Artery Disease Care Recognition Sample Data Set Calculation

Clinical Measures	BP	LDL	LDL Rx Therapy	LDL Profile	Activity Level and Anginal symptoms	Smoking Status Cessation & Tx	ASA or other antiplatelet	ACE-I/ARB Rx Therapy	Persistent β Blocker therapy w/prior AMI	β Blocker therapy w/prior AMI
Patient 1	125/75	95	NO	YES	YES	YES	NO	YES	YES	YES
Patient 2	140/90	90	YES	YES	NO	NO	NO	YES	NO	NO
Patient 3	160/90	175	YES	YES	YES	YES	YES	YES	YES	YES
Patient 4	135/80	88	YES	NO	YES	NO	NO	NO	YES	YES
Patient 5	155/110	85	YES	YES	NO	NO	YES	YES	YES	YES
Patient 6	120/75	140	YES	NO	NO	NO	YES	YES	YES	YES
Patient 7	140/85	98	YES	NO	YES	YES	YES	YES	NO	NO
Patient 8	170/90	175	NO	YES	NO	YES	YES	NO	YES	YES
Patient 9	130/75	180	YES	YES	YES	YES	YES	NO	YES	YES
Patient 10	130/85	125	YES	YES	YES	YES	YES	YES	YES	YES
Patient 11	140/80	160	YES	YES	NO	NO	NO	YES	NO	NO
Patient 12	125/85	92	YES	NO	YES	YES	YES	NO	YES	YES
Patient 13	135/90	98	YES	YES	YES	YES	NO	YES	YES	YES
Patient 14	180/100	165	NO	NO	YES	YES	NO	YES	YES	YES
Patient 15	135/85	85	YES	YES	NO	NO	NO	YES	NO	NO
Patient 16	165/100	168	NO	YES	YES	YES	YES	YES	YES	YES
Patient 17	130/70	120	YES	YES	NO	YES	YES	YES	YES	YES
Patient 18	125/80	94	NO	YES	NO	NO	NO	YES	NO	NO
Patient 19	135/85	170	YES	YES	YES	NO	YES	YES	YES	YES
Patient 20	120/65	98	YES	YES	YES	YES	YES	YES	YES	YES
Patient 21	110/75	90	YES	NO	YES	YES	YES	NO	YES	YES
Patient 22	115/70	115	YES	YES	NO	YES	YES	YES	YES	YES
Patient 23	125/75	120	YES	YES	YES	NO	NO	YES	YES	YES
Patient 24	135/85	110	YES	YES	NO	YES	YES	YES	YES	YES
Patient 25	120/80	84	NO	NO	YES	YES	NO	NO	YES	YES

Level I Recognition

Clinical Measures	Threshold	Minimum Criteria	Sample Meeting Threshold	Maximum Available Points	Points Earned
<i>Poor control measures</i>					
Blood Pressure Control	≥ 145/95	≤ 45% of pts in sample	5/25 = 20 %	20	16.0
LDL Control	≥ 130 mg/dl	≤ 40% of pts in sample	8/25 = 32%	20	13.6
<i>Superior control measures</i>					
Blood Pressure Superior Control	< 140/90	≥ 20% of pts in sample	16/25 = 64%	10	6.4
LDL Superior Control	< 100 mg/dl	≥ 25% of pts in sample	12/25 = 48%	10	4.8
<i>Process measures</i>					
LDL Medication Therapy	N/A	N/A	19/25 = 76%	2.5	1.9
Complete Lipid Profile	N/A	N/A	18/25 = 72%	2.5	1.8
Evaluation of Activity Level & Anginal Symptoms	N/A	≥ 65% of pts in sample	15/25 = 60%	5.0	0
Smoking Status and Cessation Advice & Tx	N/A	N/A	16/25 = 64%	5.0	3.2
Use of Aspirin or Other Antiplatelet Therapy	N/A	≥ 50% of pts in sample	15/25 = 60%	5	3.0
ACE-I/ARB Medication Therapy w/LVSD	N/A	≥ 75% of pts in sample	19/25 = 76%	7.5	5.7
Persistent β Blocker Therapy post AMI	N/A	≥ 75% of pts in sample	20/25 = 80%	7.5	6.0
β Blocker Therapy with prior AMI	N/A	≥ 75% of pts in sample	20/25 = 80%	5	4.0
TOTAL POINTS				100	66.4
PERCENTAGE OF TOTAL POINTS NEEDED TO ACHIEVE RECOGNITION				60	60

Level II Recognition

Clinical Measures	Threshold	Minimum Criteria	Sample Meeting Threshold	Maximum Available Points	Points Earned
<i>Poor control composite measure</i>					
Blood Pressure Control	≥ 145/95	N/A	9/25 = 36%	40	25.6
LDL Control	≥ 130 mg/dl				
<i>Superior control measures</i>					
Blood Pressure Superior Control	< 140/90	≥ 20% of pts in sample	16/25 = 64%	10	6.4
LDL Superior Control	< 100 mg/dl	≥ 25% of pts in sample	12/25 = 48%	10	4.8
<i>Process measures</i>					
LDL Medication Therapy	N/A	N/A	19/25 = 76%	2.5	1.9
Complete Lipid Profile	N/A	N/A	18/25 = 72%	2.5	1.8
Evaluation of Activity Level & Anginal Symptoms	N/A	≥ 65% of pts in sample	15/25 = 60%	5.0	0
Smoking Status and Cessation Advice & Tx	N/A	N/A	16/25 = 64%	5.0	3.2
Use of Aspirin or Other Antiplatelet Therapy	N/A	≥ 50% of pts in sample	15/25 = 60%	5	3.0
ACE-I/ARB Medication Therapy w/LVSD	N/A	≥ 75% of pts in sample	19/25 = 76%	7.5	5.7
Persistent β Blocker Therapy post AMI	N/A	≥ 75% of pts in sample	20/25 = 80%	7.5	6.0
β Blocker Therapy with prior AMI	N/A	≥ 75% of pts in sample	20/25 = 80%	5	4.0
TOTAL POINTS				100	62.4
PERCENTAGE OF TOTAL POINTS NEEDED TO ACHIEVE RECOGNITION				60	60

Level III Recognition

Clinical Measures	Threshold	Minimum Criteria	Sample Meeting Threshold	Maximum Available Points	Points Earned
<i>Poor control composite measure</i>					
Blood Pressure Control	≥ 145/95	N/A	9/25 = 36%	40	25.6
LDL Control	≥ 130 mg/dl				
<i>Superior control composite measure</i>					
Blood Pressure Control	< 140/90	N/A	8/25 = 32%	20	6.4
LDL Control	< 100 mg/dl				
<i>Process measures</i>					
LDL Medication Therapy	N/A	N/A	19/25 = 76%	2.5	1.9
Complete Lipid Profile	N/A	N/A	18/25 = 72%	2.5	1.8
Evaluation of Activity Level & Anginal Symptoms	N/A	≥ 65% of pts in sample	15/25 = 60%	5.0	0
Smoking Status and Cessation Advice & Tx	N/A	N/A	16/25 = 64%	5.0	3.2
Use of Aspirin or Other Antiplatelet Therapy	N/A	≥ 50% of pts in sample	15/25 = 60%	5	3.0
ACE-I/ARB Medication Therapy w/LVSD	N/A	≥ 75% of pts in sample	19/25 = 76%	7.5	5.7
Persistent β Blocker Therapy post AMI	N/A	≥ 75% of pts in sample	20/25 = 80%	7.5	6.0
β Blocker Therapy with prior AMI	N/A	≥ 75% of pts in sample	20/25 = 80%	5	4.0
TOTAL POINTS				100	57.6
PERCENTAGE OF TOTAL POINTS NEEDED TO ACHIEVE RECOGNITION				60	60