



Measure Information

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

Brief Measure Information

NQF #: 0964

Corresponding Measures:

De.2. Measure Title: Therapy with aspirin, P2Y12 inhibitor, and statin at discharge following PCI in eligible patients

Co.1.1. Measure Steward: American College of Cardiology

De.3. Brief Description of Measure:) Proportion of eligible patients = 18 years of age, who were prescribed aspirin, P2Y12 inhibitor, and statin at discharge following PCI with or without stenting.

1b.1. Developer Rationale: This measure is intended to improve rates of evidence-based medication prescribing for patients following PCI to improve outcomes associated with cardiovascular disease.

S.4. Numerator Statement: Patients who receive all medications for which they are eligible.

1. Aspirin prescribed at discharge (if eligible for aspirin as described in denominator)

AND

2. P2Y12 agent (clopidogrel, prasugrel, ticlopidine, or ticagrelor) prescribed at discharge (if eligible for P2Y12 as described in denominator)

AND

3. Statin prescribed at discharge (if eligible for statin as described in denominator)

S.6. Denominator Statement: Patients surviving hospitalization who are eligible to receive any of the three medication classes:

1) Eligible for aspirin (ASA): Patients undergoing PCI who do not have a contraindication to aspirin documented

AND

2) Eligible for P2Y12 agent (clopidogrel, prasugrel, ticlopidine, or ticagrelor): Patients undergoing PCI with stenting who do not have a contraindication to P2Y12 agent documented

AND

3) Eligible for statin therapy: Patients undergoing PCI who do not have a contraindication to statin therapy.

S.8. Denominator Exclusions: The exclusions for this measure are comprised of patients without the following: (1) a PCI during the admission, (2) discharge status of deceased (9040), and (3) discharge location of "other acute hospital, hospice, or against medical advice.

De.1. Measure Type: Composite

S.17. Data Source: Other, Registry Data

S.20. Level of Analysis: Facility

IF Endorsement Maintenance – Original Endorsement Date: Feb 05, 2013 **Most Recent Endorsement Date:** Jun 10, 2019

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

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

De.4. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results? N/A

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

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

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

[0964_nqf_evidence_attachment_7.1_11.7.18_final.docx](#)

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

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

No

1b. Performance Gap

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

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

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

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

This measure is intended to improve rates of evidence-based medication prescribing for patients following PCI to improve outcomes associated with cardiovascular disease.

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

Please see "0964 Main Submission Form Supplement" for a response to this question.

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

There is a demonstration for an opportunity for improvement based on the noted performance ranges. One in five hospitals performed at rates below 90% for the composite.

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

Please see "0964 Main Submission Form Supplement" for a response to this question.

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

None

1c. Composite Quality Construct and Rationale

1c.1. A composite performance measure is a combination of two or more component measures, each of which individually reflects quality of care, into a single performance measure with a single score.

For purposes of NQF measure submission, evaluation, and endorsement, the following will be considered composites:

- Measures with two or more individual performance measure scores combined into one score for an accountable entity.
- Measures with two or more individual component measures assessed separately for each patient and then aggregated into one score for an accountable entity:
 - all-or-none measures (e.g., all essential care processes received, or outcomes experienced, by each patient);

1c.1. Please identify the composite measure construction: [all-or-none measures \(e.g., all essential care processes received, or outcomes experienced, by each patient\)](#)

1c.2. Describe the quality construct, including:

- the overall area of quality
- included component measures and
- the relationship of the component measures to the overall composite and to each other.

[We believe the content validity of this measure has been achieved by virtue of the expertise of those individuals who developed this measure. The individual components of the composite have already shown to influence clinical outcomes. This measure focuses on processes of care that are supported by guidelines for optimal care for patients following percutaneous coronary intervention \(PCI\), a procedure to treat coronary artery obstructions that often includes placement of a coronary stent. Each of the components of this measure address appropriate medication prescribing at discharge for this population. Specifically, it is known that the use of statin drugs, which reduce LDL cholesterol, reduces the risk of death or future cardiovascular events in individuals with known coronary artery disease, including those who have undergone PCI. Following PCI, both aspirin use and P2Y12 inhibitors \(e.g. clopidogrel or prasugrel\) reduce the risk of ischemic events. This research demonstrates that this measure contributes to improved intermediate outcomes and important outcomes such as reductions in hospitalizations and mortality rates. In addition, we examined the contribution of each of the individual components to the overall composite \(using r-squared analysis\). We found statins had the highest explanatory value \(90.5%\), followed by ASA \(60.4%\), and P2Y12 \(35.3%\).](#)

1c.3. Describe the rationale for constructing a composite measure, including how the composite provides a distinctive or additive value over the component measures individually.

[This measure is intended to assess the extent to which eligible patients receive evidence-based medications that are indicated at hospital discharge following PCI.](#)

[Composite performance measures have a variety of uses.](#)

[Data reduction. A large and growing array of individual indicators makes it possible for users to become overloaded with data. A composite measure reduces the information burden by distilling the available indicators into a simple summary.](#)

[Scope expansion. The information in a composite measure is highly condensed, making it feasible to track a broader range of metrics than would be possible otherwise. Composite measures have been described as a tool for making provider assessments more comprehensive](#)

[Provider performance valuation. Performance indicators are used for various decisions about providers, including the allocation of pay-for-performance incentives, designation of preferred provider status, and assignment of letter grades and star rating categories. If a decision is to be based on multiple indicators instead of a single indicator, a method of translating several variables into a single decision is needed. Composite measures serve this function by assigning providers to 1 position on a scale of better-to-worse performance.](#)

[Given all these uses, NCDR believes that while we will continue to report these measures at the individual level there is a distinctive value of having a composite measure endorsed at NQF.](#)

1c.4. Describe how the aggregation and weighting of the component measures are consistent with the stated quality construct and rationale.

[This is an all-or-none composite, thus no empirical analyses pertinent to aggregations or weighting were conducted. The components mentioned throughout the application are part of the composite measure indicator definition, not the composite of different measures.](#)

2. Reliability and Validity—Scientific Acceptability of Measure Properties

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. **Measures must be judged to meet the sub criteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.**

2a.1. Specifications The measure is well defined and precisely specified so it can be implemented consistently within and across organizations and allows for comparability. eMeasures should be specified in the Health Quality Measures Format (HQMF) and the Quality Data Model (QDM).

De.5. Subject/Topic Area (check all the areas that apply):
Cardiovascular, Cardiovascular : Coronary Artery Disease (PCI)

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

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

S.1. Measure-specific Web Page (Provide a URL link to a web page specific for this measure that contains current detailed specifications including code lists, risk model details, and supplemental materials. Do not enter a URL linking to a home page or to general information.)
ACC does not have a measure specific webpage. However more information about the clinical registry that the measure is included in can be found at: <https://cvquality.acc.org/NCDR-Home/registries/hospital-registries/cathpci-registry>.

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

S.2b. Data Dictionary, Code Table, or Value Sets (and risk model codes and coefficients when applicable) must be attached. (Excel or csv file in the suggested format preferred - if not, contact staff)
Attachment Attachment: [CathPCI_v4_CodersDictionary_4.4-635230042811280622-636329455190369406.pdf](#)

S.2c. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.
No, this is not an instrument-based measure Attachment:

S.2d. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.
Not an instrument-based measure

S.3.1. For maintenance of endorsement: Are there changes to the specifications since the last updates/submission. If yes, update the specifications for S1-2 and S4-22 and explain reasons for the changes in S3.2.
No

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

S.4. Numerator Statement (Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome) **DO NOT** include the rationale for the measure.
IF an OUTCOME MEASURE, state the outcome being measured. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

Patients who receive all medications for which they are eligible.

1. Aspirin prescribed at discharge (if eligible for aspirin as described in denominator)

AND

2. P2Y12 agent (clopidogrel, prasugrel, ticlopidine, or ticagrelor) prescribed at discharge (if eligible for P2Y12 as described in denominator)

AND

3. Statin prescribed at discharge (if eligible for statin as described in denominator)

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

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

If eligible for Aspirin (9505) and prescribed (9510), then code “Yes”

If eligible for Aspirin (9505) and not prescribed (9510), then code “No”

If eligible for P2Y12 (9505) and prescribed (9510) , then code then “Yes”

If eligible for P2Y12 (9505)and not prescribed (9510), then code “No”

If eligible for statin (9505) and prescribed (9510) , then code “Yes”

If eligible for statin (9505) and not prescribed (9501) given, then code “No”

If any “No, not prescribed” present, then performance not met. Else, performance met.

Note: Contraindicated and those participating in blinded studies are also considered as exceptions and performance met if patient is eligible for at least one medication (aspirin or statin or P2Y12).

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

Patients surviving hospitalization who are eligible to receive any of the three medication classes:

- 1) Eligible for aspirin (ASA): Patients undergoing PCI who do not have a contraindication to aspirin documented

AND

- 2) Eligible for P2Y12 agent (clopidogrel, prasugrel, ticlopidine, or ticagrelor): Patients undergoing PCI with stenting who do not have a contraindication to P2Y12 agent documented

AND

- 3) Eligible for statin therapy: Patients undergoing PCI who do not have a contraindication to statin therapy.

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

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

The following patients are included in the denominator:

1. Patients 18 years of age or older (2050)
2. Patients undergoing PCI during the episode of care (5305)
3. PCI patients who are eligible for at least one of the following medications: aspirin, statin, and P2Y12 (7155, 9505, 9510)

Note:

- Eligibility for measures is determined by whether the PCI procedure included a stent (aspirin, statin, and P2Y12) or no stent (aspirin and statin) and whether patient had contraindication or was blinded to the medication
- All data element numbers listed above are included in the attach data dictionary which includes more detailed definitions for the above elements.

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

The exclusions for this measure are comprised of patients without the following: (1) a PCI during the admission , (2)discharge status of deceased (9040), and (3) discharge location of “other acute hospital, hospice, or against medical advice.

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

The exclusions for this measure include:

1. Patients without a PCI during the admission (5305)
2. Patients with a discharge status of deceased (9040),
3. Patients with a discharge location of “other acute hospital, hospice, or against medical advice (9405).

NCDR distinguishes between absolute “Exclusions” (e.g., death, transfer) and relative “Exceptions”, (e.g., contraindications). Patients with exclusions are always automatically removed from the denominator and numerator; exceptions allow clinicians the opportunity to identify an intervention/process/medication as not clinically indicated based on the individual circumstances.

Each of the three medications incorporated into this composite may be coded as Yes (medication prescribed), No (medication not prescribed), Blinded (pt. involved in a clinical trial, medication type unavailable for data entry), and Contraindicated.

With respect to exceptions, patients are removed from the denominator if they have contraindication or are blinded across ALL medications that they are eligible for.

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

N/A

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

No risk adjustment or risk stratification

If other:

S.12. Type of score:

Rate/proportion

If other:

S.13. Interpretation of Score *(Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score)*

Better quality = Higher score

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

- 1) Remove patients whose discharge status is deceased
- 2) Check if given patient is eligible for 1 of the 3 medication therapies.
- 3) If eligible for at least 1 medication, then keep this patient.
- 4) If not eligible for any of the 3 medications, then patient is removed from eligibility.

5) If eligible for Aspirin and given, then code “Yes”

If eligible for Aspirin and not given, then code “No, not given”

<p>If eligible for Aspirin but contraindicated, then code “contraindicated/blinded”</p> <p>If eligible for P2Y12 and given, then code then “Yes”</p> <p>If eligible for P2Y12 and not given, then code “No, not given”</p> <p>If eligible for P2Y12 but contraindicated, then code “contraindicated/blinded”</p> <p>If eligible for statin and given, then code “Yes”</p> <p>If eligible for statin and not given, then code “No, not given”</p> <p>If eligible for statin but contraindicated, then code “contraindicated/blinded”</p> <p>6) If any “No, not given” present, then performance not met. Else, performance met.</p>
<p>S.15. Sampling (If measure is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.)</p> <p>IF an <u>instrument-based</u> performance measure (e.g., PRO-PM), identify whether (and how) proxy responses are allowed.</p> <p>N/A</p> <p>S.16. Survey/Patient-reported data (If measure is based on a survey or instrument, provide instructions for data collection and guidance on minimum response rate.)</p> <p>Specify calculation of response rates to be reported with performance measure results.</p> <p>N/A</p>
<p>S.17. Data Source (Check ONLY the sources for which the measure is SPECIFIED AND TESTED).</p> <p>If other, please describe in S.18.</p> <p>Other, Registry Data</p> <p>S.18. Data Source or Collection Instrument (Identify the specific data source/data collection instrument (e.g. name of database, clinical registry, collection instrument, etc., and describe how data are collected.)</p> <p>IF <u>instrument-based</u>, identify the specific instrument(s) and standard methods, modes, and languages of administration.</p> <p>National Cardiovascular Data Registry (NCDR®) CathPCI Registry®</p> <p>S.19. Data Source or Collection Instrument (available at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)</p> <p>Available at measure-specific web page URL identified in S.1</p> <p>S.20. Level of Analysis (Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED)</p> <p>Facility</p> <p>S.21. Care Setting (Check ONLY the settings for which the measure is SPECIFIED AND TESTED)</p> <p>Inpatient/Hospital</p> <p>If other:</p>
<p>S.22. COMPOSITE Performance Measure - Additional Specifications (Use this section as needed for aggregation and weighting rules, or calculation of individual performance measures if not individually endorsed.)</p> <p>N/A</p>
<p>2. Validity – See attached Measure Testing Submission Form</p> <p>0964_testing_form_20180730_FINAL_Method_Panel_8.16.18FINAL-636700325254407268.docx</p> <p>2.1 For maintenance of endorsement</p> <p>Reliability testing: If testing of reliability of the measure score was not presented in prior submission(s), has reliability testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.</p> <p>Yes</p>

2.2 For maintenance of endorsement

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

Yes

2.3 For maintenance of endorsement

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

No - This measure is not risk-adjusted

3. Feasibility

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

3a. Byproduct of Care Processes

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

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

Generated or collected by and used by healthcare personnel during the provision of care (e.g., blood pressure, lab value, diagnosis, depression score), Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims), Abstracted from a record by someone other than person obtaining original information (e.g., chart abstraction for quality measure or registry)

If other:

3b. Electronic Sources

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

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

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

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

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

Attachment:

3c. Data Collection Strategy

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

3c.1. Required for maintenance of endorsement. Describe difficulties (as a result of testing and/or operational use of the

measure) regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.

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

There were no difficulties noted with regard to data collection, availability of data, missing data, the frequency of data collection, patient confidentiality, time and cost of data collection, or other feasibility/implementation issues. In addition, the NCDR has a robust data collection process as outlined below"

Availability:

Participating hospitals report patient demographics, medical history, risk factors, hospital presentation, initial cardiac status, procedural details, medications, laboratory values and in-hospital outcomes. The majority of the 5 required data elements are routinely generated and acquired during the delivery of standard cardiac care to this patient population. Electronic extraction of data recorded as part of the procedure expedites data collection. This strategy offers point of care collection and minimizes time and cost. Institutions can manually report using a free web-based tool or automate the reporting by using certified software developed by third-party vendors. The data elements required for this measure are readily available within the patient's medical record or can be attained without undue burden within the hospital. Most data elements exist in a structured format within patient's electronic health record.

Sampling:

There is no sampling of patient data allowed within the contractual terms of participation in the CathPCI Registry in NCDR. The registry is designed to include 100 percent of consecutive adult patients who undergo PCI at participating institutions. Section 2.b of the NCDR Master Agreement with participants includes 'Participant Responsibilities': "b. Use of ACCF Data Set and ACCF-Approved Software. Participant will submit a data record on each patient who receives medical care and who is eligible for inclusion in the Registries in which Participant is participating under this Agreement." Adult patients, ages 18 years and older, who undergo a diagnostic cardiac catheterization and/or PCI. Eligible diagnostic catheterizations are characterized by the passage of a catheter into the aortic root for pressure measurements and/or angiography, and can include Left Ventricle (LV) pressure measurements, LV angiography, coronary angiography, and coronary artery bypass angiography. Eligible PCI procedures include those that involve passage or attempted passage of a coronary device across one or more coronary lesions for purposes of increasing the intraluminal diameter of the vessel and/or restoring or improving circulation. Patients are selected for inclusion by reviewing existing medical records and no direct interaction with the patient will be required outside of the normal course of care. There will be no discrimination or bias with respect to inclusion on the basis of sex, race, or religion.

Patient confidentiality:

Patient confidentiality is preserved as the data are in aggregate form. The CathPCI Registry dataset, comprised of approximately 263, data elements was created by a panel of experts using available ACC-AHA guidelines, data elements and definitions, and other evidentiary sources. Private health information (PHI), such as social security number, is collected. The intent for collection of PHI is to allow for registry interoperability and the potential for future generation of patient-level drill downs in Quality and Outcomes Reports. Registry sites can opt out of transmitting direct identifiers to the NCDR, however, so inclusion of direct identifiers in the registry is at the discretion of the registry participants themselves. When using the NCDR web-based data collection tool, direct identifiers are entered but a partition between the data collection process and the data warehouse maintains the direct identifiers separate from the analysis datasets. The minimum level of PHI transmitted to the ACCF when a participant opts out of submitting direct identifiers meets the definition of a Limited Dataset as such term is defined by the Health Insurance Portability and Accountability Act of 1996.

Data collection within the NCDR conforms to laws regarding protected health information. Patient confidentiality is of utmost concern with all metrics. The proposed measure does not include a patient survey. Physician and/or institutional confidentiality is maintained by de-identified dashboard reports. There is no added procedural risk to patients through involvement in the CathPCI Registry. No testing, time, risk, or procedures beyond those required for routine care will be imposed. The primary risk associated with this measure is the potential for a breach of patient confidentiality. The ACCF has established a robust plan for ensuring appropriate and commercially reasonable physical, technical, and administrative safeguards are in place to mitigate such risks.

Data are maintained on secure servers with appropriate safeguards in place. The project team periodically reviews all activities involving protected health information to ensure that such safeguards including standard operating procedures are being followed. The procedure for notifying the ACCF of any breach of confidentiality and immediate mitigation standards that need to be followed

is communicated to participants. ACCF limits access to Protected Health Information, and to equipment, systems, and networks that contain, transmit, process or store Protected Health Information, to employees who need to access the PHI for purposes of performing ACCF's obligations to participants who are in a contractual relationship with the ACCF. All PHI are stored in a secure facility or secure area within ACCF's facilities which has separate physical controls to limit access, such as locks or physical tokens. The secured areas are monitored 24 hours per day, 7 days per week, either by employees or agents of ACCF by video surveillance, or by intrusion detection systems.

Each participant who has access to the NCDR website must have a unique identifier. The password protected webpages have implement inactivity time-outs. Encryption of wireless network data transmission and authentication of wireless devices containing NCDR Participant's information ACCF's network is required. Protected Health Information may only be transmitted off of ACCF's premises to approved parties, which shall mean: A subcontractor who has agreed to be bound by the terms of the Business Associate Agreement between the ACCF and the NCDR Participant.

Time of Data collection:

1 Full time employee can enter on average roughly 1200 patient records per year
(citation: ACC Marketing Intelligence Team)

Annual Fee:

See section 3c2

Overall there is no added procedural risk to patients through their hospital's involvement in the CathPCI Registry. No testing, time, risk, or procedures beyond those required for routine care will be imposed.

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

This measure was developed and designed to be used across other organizations and by other measure implementers. The fee and licensing information include below is specific to NCDR program requirements:

The ACCF's program the National Cardiovascular Data Registry (NCDR) provides evidence-based solutions for cardiologists and other medical professionals committed to excellence in cardiovascular care. NCDR hospital participants receive confidential benchmark reports that include access to measure macro specifications and micro specifications, the eligible patient population, exclusions, and model variables (when applicable). In addition to hospital sites, NCDR Analytic and Reporting Services provides consenting hospitals' aggregated data reports to interested federal and state regulatory agencies, multi-system provider groups, third-party payers, and other organizations that have an identified quality improvement initiative that supports NCDR-participating facilities. Lastly, the ACCF also allows for licensing of the measure specifications outside of the Registry. For calendar year 2017, the annual pricing for hospitals, NCDR Analytic and Reporting Services, and licensing of measure specifications ranges from \$2900-\$50,000.

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

There is no added procedural risk to patients through their hospital's involvement in the CathPCI Registry. No testing, time, risk, or procedures beyond those required for routine care will be imposed.

4. Usability and Use

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

4a. Accountability and Transparency

Performance results are used in at least one accountability application within three years after initial endorsement and are publicly reported within six years after initial endorsement (or the data on performance results are available). If not in use at

the time of initial endorsement, then a credible plan for implementation within the specified timeframes is provided.

4.1. Current and Planned Use

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

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

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

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

Payment Programs:

Name of program and sponsor: Blue Distinction Centers for Cardiac Care; Sponsor: Blue Cross Blue Shield Association

Purpose:

The Blue Distinction Centers for Cardiac Care is a national designation program that recognizes hospitals that demonstrate expertise in delivering quality specialty care, safely and effectively. To earn the Blue Distinction Centers+ designation, hospitals must meet the same quality criteria as Blue Distinction Centers, and go an extra step to demonstrate that they do so cost efficiently. Quality is key: only those facilities that first meet Blue Distinction's nationally established, objective quality measures will be considered for designation as a Blue Distinction Center+. Blue Distinction Centers' goal is to help consumers find both quality and value for their specialty care needs, on a consistent basis, while encouraging healthcare professionals to improve the overall quality and delivery of care nationwide. [Retrieved from <http://www.bcbs.com/healthcare-partners/blue-distinction-for-providers/cardiacprogramcriteria.pdf> on 11/25/13]

Geographic area and number and percentage of accountable entities and patients included

Geographic Area: National program.

Number: Directory of Providers available at <http://www.bcbs.com/why-bcbs/blue-distinction/blue-distinction-cardiac/bluedistinctioncardiac.pdf>

% of accountable entities: Total of 414 hospitals

Alabama	10
Arizona	4
Arkansas	3
California	46
Colorado	6
Connecticut	5
Delaware	3
Florida	29
Georgia	4
Hawaii	1
Idaho	3
Illinois	29
Indiana	12
Iowa	8
Kansas	5
Kentucky	5
Louisiana	5
Maine	1
Massachusetts	8

Michigan	23
Minnesota	12
Missouri	12
Nebraska	5
New Hampshire	2
New Jersey	3
New York	12
Nevada	2
North Carolina	10
North Dakota	4
Ohio	26
Oklahoma	4

Patients included: information not available .

The measure is also used in the Quality Insight Hospital Program with Anthem, which overlaps with what is included above for Blue Distinction program

NCDR Public Reporting

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

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

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

NQF: 2377: Overall Defect Free Care Composite (which is identified on the website as the "Complete Heart Attack Care")

NCDR CathPCI Registry:

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

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

N/A

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

aggregation and reporting.)

N/A

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

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

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

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

The majority of the required data elements are routinely generated and acquired during the delivery of standard cardiac care to this patient population. Electronic extraction of data recorded as part of the procedure expedites data collection. This strategy offers point of care collection and minimizes time and cost. Institutions can manually report using a free web-based tool or automate the reporting by using certified software developed by third-party vendors. The data elements required for this measure are readily available within the patient's medical record or can be attained without undue burden within the hospital. Most data elements exist in a structured format within patient's electronic health record.

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

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

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

- Release notes (for outcomes reports)
- Clinical Support

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

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

Describe how feedback was obtained.

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

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

Users have not reported any difficulties with reporting this measure.

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

No feedback was received from other users.

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

N/A

Improvement

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

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

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

The trend identified in the EFFECT study [JAMA. 2009; 302(21):2330-2337. doi: 10.1001/jama.2009.1731] with respect to the effectiveness of public report cards for improving the quality of cardiac care, we feel this measure made available for public reporting continues to stimulate local, hospital-specific changes in delivery of care that may contribute to the better outcomes. This composite measure provides the opportunity to develop common strategies across hospitals for addressing needs associated with medication prescribing, medication reconciliation at discharge, guideline driven care and potentially the reduction of morbidity, mortality and hospital readmissions costs by encouraging the proper use of cardiac prescription medication. Performance rates for the composite measure have increased over time, corresponding to a growing denominator (Table 4). These 2011-2016 rates indicate that outcomes are improving, as more patients undergoing PCI are receiving all medications for which they are eligible.

Table 4: Performance Rates for Discharge Medications Composite Measure From 2011-2016

YEAR	DEN	NUM	%
2011	618146	551717	89.25
2012	627181	570435	90.95
2013	633696	586406	92.54
2014	651046	608801	93.51
2015	682385	643508	94.30
2016	703998	669255	95.06

4b2. Unintended Consequences

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

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

Inaccuracies may occur if certified vendors export data incorrectly, in transmission of data from medical record to a paper form and then to the online data collection tool. Some sites may over-code medication exclusions.

A vendor certification process has been established to ensure high quality data collection and submission.

The NCDR Data Quality Program is in place to assess reliability of data abstraction. For additional details about the NCDR Data Quality Program please see testing supplement.

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

None

5. Comparison to Related or Competing Measures

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

5. Relation to Other NQF-endorsed Measures

Are there related measures (conceptually, either same measure focus or target population) or competing measures (conceptually both the same measure focus and same target population)? If yes, list the NQF # and title of all related and/or competing measures.

Yes

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

0067 : Coronary Artery Disease (CAD): Antiplatelet Therapy

0068 : Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antiplatelet

0074 : Chronic Stable Coronary Artery Disease: Lipid Control

0118 : Anti-Lipid Treatment Discharge

0142 : Aspirin prescribed at discharge for AMI

0543 : Adherence to Statin Therapy for Individuals with Cardiovascular Disease

0569 : ADHERENCE TO STATINS

0631 : Secondary Prevention of Cardiovascular Events - Use of Aspirin or Antiplatelet Therapy

0639 : Statin Prescribed at Discharge

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

Statin measures

0543: Adherence to Statin Therapy for Individuals with Coronary Artery Disease is not specific to patients undergoing a PCI. This measure uses claims data and it is not evaluated at the point of discharge. This is a measure using claims data and determines whether patients are filling their prescription. The measure we propose evaluates if the prescription has been provided to the patients.

0569: Adherence to Statin is similar to measure 0543 listed above and is not specific to patients undergoing PCI. This is a measure using claims data and determines whether patients are filling their prescription. The measure we propose evaluates if the prescription has been provided to the patients.

0118: Anti-Lipid Treatment Discharge includes patients undergoing CABG, not PCI. It also includes non statins as well as statins.

0074: Chronic Stable Coronary Artery Disease: Lipid Control includes all patients with CAD and is not specific to those patients who have had a PCI.

0639: Statin Prescribed at Discharge evaluates patients who have had a myocardial infarction. There may be patient overlap with this measure and the one proposed. The composite measure proposed in this application however contains two other guideline recommended medication. Our measure includes all PCI patients not only those who have had a MI, thus ours is monitoring secondary prevention as well as the tertiary prevention that is measured by CMS.

P2Y12/Aspirin component

0142: Aspirin prescribed at discharge for AMI evaluates patients who have had a myocardial infarction. There may be patient overlap with this measure and the one proposed. The composite measure proposed in this application however contains two other guideline recommended medication. Our measure includes all PCI patients not only those who have had a MI, thus ours is monitoring secondary prevention as well as the tertiary prevention that is measured by CMS.

0067: Chronic Stable Coronary Artery Disease: Antiplatelet Therapy includes all patients with CAD and is not specific to those patients who have had a PCI.

0068: Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic includes a larger patient population of patients who were discharged for acute myocardial infarction, coronary artery bypass graft or percutaneous coronary interventions. The measure 0068 measures patients who had documentation of use of aspirin or another antithrombotic during the measurement year. The critical difference is the use of the term "or" that allows patients to be included into the numerator of this measure. Evidence indicates that Dual Antiplatelet Therapy is the ideal medical therapy of choice for this patient population. The composite measure proposed in this application follows the current medical guidelines for treating patients undergoing PCI with both Aspirin and a specifically anti platelets medications within the P2Y12 inhibitor drug class.

0631 Secondary Prevention of Cardiovascular Events - Use of Aspirin or Antiplatelet Therapy

The critical difference is the use of the term “or” that allows patients to be included into the numerator of this measure. Evidence indicates that Dual Antiplatelet Therapy is the ideal medical therapy of choice for this patient population. The composite measure proposed in this application follows the current medical guidelines for treating patients undergoing PCI with both Aspirin and a specifically anti platelets medications within the P2Y12 inhibitor drug class.

Measure # 2452 has a clear distinction between absolute “Exclusions” (e.g., death, transfer) and relative “Exceptions”, (e.g., medical reasons, system reasons, and patient reasons). While patients with exclusions are always automatically removed from the denominator and numerator, exceptions allow clinicians the opportunity to identify an intervention/process/medication as not clinically indicated based on the unique patient scenario. When no exception has been documented, then the performance has not been met for the physician level reported Measure #2452.

Measure # 0964 does not provide detail on exceptions that would removed the patients from the numerator or denominator. Each of the three medications incorporated into this composite may be coded as Yes (medication prescribed), No (medication not prescribed), Blinded (pt. involved in a clinical trial, medication type unavailable for data entry), and Contraindicated (used to capture many of the medical exceptions used in measure #2452). The difference between these two measures is that the medical record must describe the contraindication in detail in order for this option to be selected. A list of medical exceptions has not been provided by the ACC for this hospital based level of reporting.

5a. Harmonization of Related Measures

The measure specifications are harmonized with related measures;

OR

The differences in specifications are justified

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

Are the measure specifications harmonized to the extent possible?

No

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

see below for discussion of harmonization and competition.

5b. Competing Measures

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

OR

Multiple measures are justified.

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

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

Statin measures

0543: Adherence to Statin Therapy for Individuals with Coronary Artery Disease is not specific to patients undergoing a PCI. This measure uses claims data and it is not evaluated at the point of discharge. This is a measure using claims data and determines whether patients are filling their prescription. The measure we propose evaluates if the prescription has been provided to the patients.

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Appendix

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

Available at measure-specific web page URL identified in S.1 Attachment:

Contact Information

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

Co.2 Point of Contact: Jarrott, Mayfield, jmayfield@acc.org

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

Co.4 Point of Contact: Kim, Lavin, klavin@acc.org

Additional Information

Ad.1 Workgroup/Expert Panel involved in measure development

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

For this particular topic those individuals who were involved in identifying the key attributes and variables for this process measure were leaders and experts in the field of interventional cardiology. Serial phone calls were held to both define the eligible population and given process. These clinical leaders are noted below.

At the time of initial endorsement, the following groups oversaw the measure:

NCDR Clinical Subworkgroup ensured the measure demonstrated an opportunity for improvement, had strong clinical evidence, and was a reliable and valid measure. These members included Drs. Jephtha Curtis (Chair), Frederick Masoudi, John Rumsfeld, Issam Moussa, and David Malenka.

NCDR Scientific Quality and Oversight Committee—a committee that served as the primary resource for crosscutting scientific and quality of care methodological issues. These members included Drs. Frederick Masoudi (Chair) , David Malenka, Thomas Tsai, Matthew Reynolds, David Shahian, John Windle, Fred Resnic, John Moore, Deepak Bhatt, James Tchong, Jephtha Curtis, Paul Chan, Matthew Roe, and John Rumsfeld.

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.2 Year the measure was first released: 2012

Ad.3 Month and Year of most recent revision: 05, 2012

Ad.4 What is your frequency for review/update of this measure? With dataset revisions and based on new evidence.

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

Ad.6 Copyright statement: American College of Cardiology Foundation All Rights Reserved

Ad.7 Disclaimers: ACC realizes the various NCDR endorsed measures are not readily available on their own main webpage. However, ACCF plans to update their main webpage (cardiosource.org) to include the macro-specifications of the NQF endorsed measures. ACC will collaborate with NQF to create a consistent and standard format would be helpful for various end users. In the interim, the supplemental materials include the details needed to understand this model.

Ad.8 Additional Information/Comments: ACC appreciates the opportunity to submit measures for this NQF endorsement maintenance project.