

## Appendix A.1

Supplemental materials for NQF submission for endorsement maintenance

Measure Title: Comprehensive Documentation of Indications for Percutaneous  
Coronary Intervention (PCI)

### Table of Contents

1. NCDR® CathPCI Registry® v4.4 Coder's Data Dictionary
2. NCDR® CathPCI Registry® v4.4 Diagnostic Catheterization Data  
Collection Form
3. Measure Calculation Description
4. Clinical Outcomes Assessment Program (COAP) Appropriateness of PCI in  
Washington State
5. Testing Data

## A. Demographics

**Seq. #: 2000    Name:** Last Name

**Coding Instructions:** Indicate the patient's last name. Hyphenated names should be recorded with a hyphen.

**Target Value:** The value on arrival at this facility

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 2010    Name:** First Name

**Coding Instructions:** Indicate the patient's first name.

**Target Value:** The value on arrival at this facility

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 2020    Name:** Middle Name

**Coding Instructions:** Indicate the patient's middle name.

**Note(s):**

It is acceptable to specify the patient's middle initial.

If the patient does not have a middle name, leave field blank.

If the patient has multiple middle names, enter all of the middle names sequentially.

**Target Value:** The value on arrival at this facility

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 2030    Name:** SSN

**Coding Instructions:** Indicate the patient's United States Social Security Number (SSN).

**Note(s):**

If the patient does not have a US Social Security Number (SSN), leave blank and check 'SSN NA'.

**Target Value:** The value on arrival at this facility

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 2031    Name:** SSN N/A

**Coding Instructions:** Indicate if the patient does not have a United States Social Security Number(SSN).

**Target Value:** The value on arrival at this facility

Selections:	<i>Selection Text</i>	<i>Definition</i>
-------------	-----------------------	-------------------

	No	
--	----	--

	Yes	
--	-----	--

**Supporting Definitions:** (none)

## A. Demographics

**Seq. #: 2040 Name:** Patient ID

**Coding Instructions:** Indicate the number created and automatically inserted by the software that uniquely identifies this patient.

**Note(s):**

Once assigned to a patient at the participating facility, this number will never be changed or reassigned to a different patient. If the patient returns to the same participating facility or for followup, they will receive this same unique patient identifier.

**Target Value:** The value on arrival at this facility

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 2045 Name:** Other ID

**Coding Instructions:** Indicate optional patient identifier, such as medical record number, that can be associated with the patient.

**Target Value:** N/A

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 2050 Name:** Birth Date

**Coding Instructions:** Indicate the patient's date of birth.

**Target Value:** The value on arrival at this facility

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 2060 Name:** Sex

**Coding Instructions:** Indicate the patient's sex at birth.

**Target Value:** The value on arrival at this facility

Selections:	Selection Text	Definition
-------------	----------------	------------

	Male	
--	------	--

	Female	
--	--------	--

**Supporting Definitions:** (none)

**Seq. #: 2070 Name:** Race - White

**Coding Instructions:** Indicate if the patient is White as determined by the patient/family.

**Note(s):**

If the patient has multiple race origins, specify them using the other race selections in addition to this one.

**Target Value:** The value on arrival at this facility

Selections:	Selection Text	Definition
-------------	----------------	------------

	No	
--	----	--

	Yes	
--	-----	--

**Supporting Definitions:** **White (Race):**

Having origins in any of the original peoples of Europe, the Middle East, or North Africa.

Source: U.S. Office of Management and Budget. Classification of Federal Data on Race and Ethnicity

## A. Demographics

**Seq. #:** 2071 **Name:** Race - Black or African American**Coding Instructions:** Indicate if the patient is Black or African American as determined by the patient/family.**Note(s):**

If the patient has multiple race origins, specify them using the other race selections in addition to this one.

**Target Value:** The value on arrival at this facility**Selections:**

No

Yes

**Supporting Definitions: Black/African American (Race):**

Having origins in any of the black racial groups of Africa. Terms such as "Haitian" or "Negro" can be used in addition to "Black or African American."

Source: U.S. Office of Management and Budget. Classification of Federal Data on Race and Ethnicity

**Seq. #:** 2072 **Name:** Race - Asian**Coding Instructions:** Indicate if the patient is Asian as determined by the patient/family.**Note(s):**

If the patient has multiple race origins, specify them using the other race selections in addition to this one.

**Target Value:** The value on arrival at this facility**Selections:**

No

Yes

**Supporting Definitions: Asian (Race):**

Having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.

Source: U.S. Office of Management and Budget. Classification of Federal Data on Race and Ethnicity

**Seq. #:** 2073 **Name:** Race - American Indian or Alaskan Native**Coding Instructions:** Indicate if the patient is American Indian or Alaskan Native as determined by the patient/family.**Note(s):**

If the patient has multiple race origins, specify them using the other race selections in addition to this one.

**Target Value:** The value on arrival at this facility**Selections:**

No

Yes

**Supporting Definitions: American Indian or Alaskan Native (Race):**

Having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment.

Source: U.S. Office of Management and Budget. Classification of Federal Data on Race and Ethnicity

## A. Demographics

**Seq. #: 2074 Name:** Race - Native Hawaiian or Pacific Islander

**Coding Instructions:** Indicate if the patient is Native Hawaiian or Pacific Islander as determined by the patient/family.

**Note(s):**

If the patient has multiple race origins, specify them using the other race selections in addition to this one.

**Target Value:** The value on arrival at this facility

Selections:	Selection Text	Definition
-------------	----------------	------------

	No	
--	----	--

	Yes	
--	-----	--

**Supporting Definitions:** **Native Hawaiian or Pacific Islander (Race):**

Having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

Source: U.S. Office of Management and Budget. Classification of Federal Data on Race and Ethnicity

**Seq. #: 2076 Name:** Hispanic or Latino Ethnicity

**Coding Instructions:** Indicate if the patient is of Hispanic or Latino ethnicity as determined by the patient/family.

**Target Value:** The value on arrival at this facility

Selections:	Selection Text	Definition
-------------	----------------	------------

	No	
--	----	--

	Yes	
--	-----	--

**Supporting Definitions:** **Hispanic or Latino Ethnicity:**

A person of Cuban, Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin, regardless of race. The term, "Spanish origin," can be used in addition to "Hispanic or Latino."

Source: U.S. Office of Management and Budget. Classification of Federal Data on Race and Ethnicity

**Seq. #: 2500 Name:** Auxiliary 1

**Coding Instructions:** Reserved for future use.

**Target Value:** N/A

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 2501 Name:** Auxiliary 2

**Coding Instructions:** Reserved for future use.

**Target Value:** N/A

**Selections:** (none)

**Supporting Definitions:** (none)

## B. Episode of Care

**Seq. #: 3000 Name:** Arrival Date**Coding Instructions:** Indicate the date the patient arrived at your facility.**Target Value:** N/A**Selections:** (none)**Supporting Definitions:** (none)**Seq. #: 3001 Name:** Arrival Time**Coding Instructions:** Indicate the time patient arrived at your facility.**Note(s):**

Indicate the time (hours:minutes) using the military 24-hour clock, beginning at midnight (0000 hours).

If the patient came to your facility for an elective or outpatient procedure and the time was not documented, code the scheduled time of arrival.

**Target Value:** N/A**Selections:** (none)**Supporting Definitions:** (none)**Seq. #: 3005 Name:** Patient Zip Code**Coding Instructions:** Indicate the patient's United States Postal Service zip code of their primary residence.**Note(s):**

If the patient does not have a U.S residence, or is homeless, leave blank and check 'Zip Code NA'.

**Target Value:** The value on arrival at this facility**Selections:** (none)**Supporting Definitions:** (none)**Seq. #: 3006 Name:** Zip Code N/A**Coding Instructions:** Indicate if the patient does not have a United States Postal Service zip code.**Note(s):**

This includes patients who do not have a U.S residence or are homeless.

**Target Value:** The value on arrival at this facility**Selections:**

No

Yes

**Supporting Definitions:** (none)**Seq. #: 3010 Name:** Admit Source**Coding Instructions:** Indicate the source of admission for the patient to your facility.**Target Value:** The value on arrival at this facility**Selections:**

Emergency department

The patient came to the facility for this episode of care via the emergency department (excludes transfers from other facilities).

Transfer in from another acute care facility

The patient was transferred from another acute care facility (even if he/she was transferred to the emergency department) for this episode of care.

Other

The patient came to the facility for this episode of care by any other means. This includes elective admissions, and transfers from non-acute care facilities.

**Supporting Definitions:** (none)

## B. Episode of Care

**Seq. #: 3020 Name:** Insurance Payors - Private Health Insurance**Coding Instructions:** Indicate if the patient's insurance payor(s) included private health insurance.**Note(s):**

A health maintenance organization (HMO) is considered private health insurance.

**Target Value:** The value on arrival at this facility**Selections:**

<i>Selection Text</i>	<i>Definition</i>
-----------------------	-------------------

No

Yes

**Supporting Definitions: Private Health Insurance:**

Private health insurance is coverage by a health plan provided through an employer or union or purchased by an individual from a private health insurance company.

Source: U.S.Census Bureau

**Seq. #: 3021 Name:** Insurance Payors - Medicare**Coding Instructions:** Indicate if the patient's insurance payor(s) included Medicare.**Target Value:** The value on arrival at this facility**Selections:**

<i>Selection Text</i>	<i>Definition</i>
-----------------------	-------------------

No

Yes

**Supporting Definitions: Medicare:**

Medicare is the Federal program which helps pay health care costs for people 65 and older and for certain people under 65 with long-term disabilities.

Source: U.S.Census Bureau

**Seq. #: 3022 Name:** Insurance Payors - Medicaid**Coding Instructions:** Indicate if the patient's insurance payor(s) included Medicaid.**Target Value:** The value on arrival at this facility**Selections:**

<i>Selection Text</i>	<i>Definition</i>
-----------------------	-------------------

No

Yes

**Supporting Definitions: Medicaid:**

Medicaid is a program administered at the state level, which provides medical assistance to the needy. Families with dependent children, the aged, blind, and disabled who are in financial need are eligible for Medicaid. It may be known by different names in different states.

Source: U.S.Census Bureau

**Seq. #: 3023 Name:** Insurance Payors - Military Health Care**Coding Instructions:** Indicate if the patient's insurance payor(s) included Military Health Care.**Target Value:** The value on arrival at this facility**Selections:**

<i>Selection Text</i>	<i>Definition</i>
-----------------------	-------------------

No

Yes

**Supporting Definitions: Military Health Care:**

Military Health care - Military health care includes TRICARE/CHAMPUS (Civilian Health and Medical Program of the Uniformed Services) and CHAMPVA (Civilian Health and Medical Program of the Department of Veterans Affairs), as well as care provided by the Department of Veterans Affairs (VA).

Source: U.S.Census Bureau

## B. Episode of Care

**Seq. #: 3024 Name:** Insurance Payors - State-Specific Plan

**Coding Instructions:** Indicate if the patient's insurance payor(s) included State-specific Plan.

**Target Value:** The value on arrival at this facility

Selections:	Selection Text	Definition
	No	
	Yes	

**Supporting Definitions:** **State Specific Plan:**

State-specific plan - Some states have their own health insurance programs for low-income uninsured individuals. These health plans may be known by different names in different states. (Non-Medicaid)

Source: U.S.Census Bureau

**Seq. #: 3025 Name:** Insurance Payors - Indian Health Service

**Coding Instructions:** Indicate if the patient's insurance payor(s) included Indian Health Service (IHS).

**Target Value:** The value on arrival at this facility

Selections:	Selection Text	Definition
	No	
	Yes	

**Supporting Definitions:** **Indian Health Service:**

Indian Health Service (IHS) is a health care program through which the Department of Health and Human Services provides medical assistance to eligible American Indians at IHS facilities. In addition, the IHS helps pay the cost of selected health care services provided at non-IHS facilities.

Source: U.S.Census Bureau

**Seq. #: 3026 Name:** Insurance Payors - Non-US Insurance

**Coding Instructions:** Indicate if the patient's insurance payor(s) included Non-US Insurance.

**Target Value:** The value on arrival at this facility

Selections:	Selection Text	Definition
	No	
	Yes	

**Supporting Definitions:** **Non-US Insurance:**

Non-U.S. Insurance refers to individuals with a payor that does not originate in the United States.

Source: U.S.Census Bureau

**Seq. #: 3027 Name:** Insurance Payors - None

**Coding Instructions:** Indicate if the patient has no insurance payor(s).

**Target Value:** The value on arrival at this facility

Selections:	Selection Text	Definition
	No	
	Yes	

**Supporting Definitions:** **None:**

None refers to individuals with no or limited health insurance thus, the individual is the payor regardless of ability to pay.

Source: NCDR



**B. Episode of Care**

---

**Seq. #: 3030 Name:** Health Insurance Claim Number**Coding Instructions:** Indicate the patient's Health Insurance Claim (HIC) number.**Note(s):**

The HIC is used for medicare and medicaid billing.

**Target Value:** The value on arrival at this facility**Selections:** (none)**Supporting Definitions: Health Insurance Claim Number:**

The Health Insurance Claim (HIC) number is the unique identifier issued to all Medicare eligible beneficiaries by either the Social Security Administration (SSA) or the Centers for Medicare &amp; Medicaid Services.

Source: Center for Medicare and Medicaid Services

---

**Seq. #: 3040 Name:** Auxiliary 7**Coding Instructions:** Reserved for future NCDR use**Target Value:** N/A**Selections:** (none)**Supporting Definitions:** (none)

---

**Seq. #: 3045 Name:** Auxiliary 8**Coding Instructions:** Reserved for future NCDR use**Target Value:** N/A**Selections:** (none)**Supporting Definitions:** (none)

---

## C. History And Risk Factors

**Seq. #: 4000 Name:** Current/Recent Smoker (w/in 1 year)**Coding Instructions:** Indicate if the patient has smoked cigarettes anytime during the year prior to arrival at your facility.**Target Value:** Any occurrence between 1 year prior to arrival at this facility and arrival at this facility

Selections:	Selection Text	Definition
	No	
	Yes	

**Supporting Definitions:** (none)**Seq. #: 4005 Name:** Hypertension**Coding Instructions:** Indicate if the patient has a current diagnosis of hypertension.**Target Value:** Any occurrence between birth and arrival at this facility

Selections:	Selection Text	Definition
	No	
	Yes	

**Supporting Definitions: Hypertension:**

Hypertension is defined by any one of the following:

1. History of hypertension diagnosed and treated with medication, diet and/or exercise
2. Prior documentation of blood pressure greater than 140 mm Hg systolic and/or 90 mm Hg diastolic for patients without diabetes or chronic kidney disease, or prior documentation of blood pressure greater than 130 mm Hg systolic and/or 80 mm Hg diastolic on at least two occasions for patients with diabetes or chronic kidney disease
3. Currently on pharmacologic therapy for treatment of hypertension.

Source: Acute Coronary Syndromes Data Standards (JACC 2001 38: 2114 - 30), The Society of Thoracic Surgeons

**Seq. #: 4010 Name:** Dyslipidemia**Coding Instructions:** Indicate if the patient has a history of dyslipidemia diagnosed and/or treated by a physician.**Target Value:** Any occurrence between birth and arrival at this facility

Selections:	Selection Text	Definition
	No	
	Yes	

**Supporting Definitions: Dyslipidemia:**

National Cholesterol Education Program criteria include documentation of the following:

1. Total cholesterol greater than 200 mg/dL (5.18 mmol/l); or
2. Low-density lipoprotein (LDL) greater than or equal to 130 mg/dL (3.37 mmol/l); or,
3. High-density lipoprotein (HDL) less than 40 mg/dL (1.04 mmol/l).

For patients with known coronary artery disease, treatment is initiated if LDL is greater than 100 mg/dL (2.59 mmol/l), and this would qualify as hypercholesterolemia

Source: Acute Coronary Syndromes Data Standards (JACC 2001 38: 2114 - 30), The Society of Thoracic Surgeons

## C. History And Risk Factors

**Seq. #:** 4015    **Name:** Family History of Premature CAD**Coding Instructions:** Indicate if the patient has a family history of premature coronary artery disease.**Note(s):**

If the patient is adopted, or the family history is unavailable, code "No".

**Target Value:** Any occurrence between birth and arrival at this facility**Selections:**    *Selection Text*                      *Definition*

No

Yes

**Supporting Definitions: Family Hx Premature CAD Direct Relatives:**

Family history includes any direct blood relatives (parents, siblings, children) who have had any of the following diagnosed at age less than 55 years for male relatives or less than 65 years for female relatives:

1. Angina
  2. Acute myocardial infarction
  3. Sudden cardiac death without obvious cause
  4. Coronary artery bypass graft surgery
  5. Percutaneous coronary intervention
- Source: NCDR, The Society of Thoracic Surgeons

## C. History And Risk Factors

Seq. #: 4020 Name: Prior MI

**Coding Instructions:** Indicate if the patient has had at least one documented previous myocardial infarction.**Note(s):**

Code 'No' if the patient's only MI occurred at the transferring facility. Admit Source (3010) must be "Transfer in from another acute care facility."

**Target Value:** Any occurrence between birth and arrival at this facility**Selections:**

<i>Selection Text</i>	<i>Definition</i>
No	
Yes	

**Supporting Definitions: MI:**

A myocardial infarction is evidenced by any of the following:

1. A rise and fall of cardiac biomarkers (preferably troponin) with at least one of the values in the abnormal range for that laboratory [typically above the 99th percentile of the upper reference limit (URL) for normal subjects] together with at least one of the following manifestations of myocardial ischemia:

- a. Ischemic symptoms.
  - b. ECG changes indicative of new ischemia (new ST-T changes, new left bundle branch block, or loss of R wave voltage).
  - c. Development of pathological Q waves in 2 or more contiguous leads in the ECG (or equivalent findings for true posterior MI).
  - d. Imaging evidence of new loss of viable myocardium or new regional wall motion abnormality.
  - e. Documentation in the medical record of the diagnosis of acute myocardial infarction based on the cardiac biomarker pattern in the absence of any items enumerated in a-d due to conditions that may mask their appearance (e.g., peri-operative infarct when the patient cannot report ischemic symptoms; baseline left bundle branch block or ventricular pacing).
2. ECG changes associated with prior myocardial infarction can include the following (with or without prior symptoms):
- a. Any Q-wave in leads V2-V3  $\geq 0.02$  seconds or QS complex in leads V2 and V3.
  - b. Q-wave  $\geq 0.03$  seconds and  $\geq 0.1$  mV deep or QS complex in leads I, II, aVL, aVF, or V4-V6 in any two leads of a contiguous lead grouping (I, aVL, V6; V4-V6; II, III, and aVF).
  - c. R-wave  $\geq 0.04$  seconds in V1-V2 and R/S  $\geq 1$  with a concordant positive T-wave in the absence of a conduction defect.
3. Imaging evidence of a region with new loss of viable myocardium at rest in the absence of a non-ischemic cause. This can be manifest as:
- a. Echocardiographic, CT, MR, ventriculographic or nuclear imaging evidence of left ventricular thinning or scarring and failure to contract appropriately (i.e., hypokinesis, akinesis, or dyskinesis).
  - b. Fixed (non-reversible) perfusion defects on nuclear radioisotope imaging (e.g., MIBI, thallium).
4. Medical records documentation of prior myocardial infarction.

Source: Joint ESC-ACC-AHA-WHF 2007 Task Force consensus document "Universal Definition of Myocardial Infarction".

## C. History And Risk Factors

**Seq. #: 4025 Name:** Prior Heart Failure**Coding Instructions:** Indicate if there is a previous history of heart failure.**Note(s):**

A previous hospital admission with principal diagnosis of heart failure is considered evidence of heart failure history.

**Target Value:** Any occurrence between birth and arrival at this facility**Selections:**

<i>Selection Text</i>	<i>Definition</i>
No	
Yes	

**Supporting Definitions:** **Heart Failure:**

Heart failure is defined as physician documentation or report of any of the following clinical symptoms of heart failure described as unusual dyspnea on light exertion, recurrent dyspnea occurring in the supine position, fluid retention; or the description of rales, jugular venous distension, pulmonary edema on physical exam, or pulmonary edema on chest x-ray. A low ejection fraction alone, without clinical evidence of heart failure does not qualify as heart failure.

Source: Acute Coronary Syndromes Data Standards (JACC 2001 38: 2114 - 30), The Society of Thoracic Surgeons

**Seq. #: 4030 Name:** Prior Valve Surgery/Procedure**Coding Instructions:** Indicate if the patient had a previous surgical replacement and/or repair of a cardiac valve, by any approach prior to arrival.**Note(s):**

This also includes percutaneous valve procedures and valvuloplasty.

**Target Value:** Any occurrence between birth and arrival at this facility**Selections:**

<i>Selection Text</i>	<i>Definition</i>
No	
Yes	

**Supporting Definitions:** (none)**Seq. #: 4035 Name:** Prior PCI**Coding Instructions:** Indicate if the patient had a previous percutaneous coronary intervention.**Note(s):**

Timeframe does NOT include PCIs performed after arrival.

**Target Value:** Any occurrence between birth and arrival at this facility**Selections:**

<i>Selection Text</i>	<i>Definition</i>
No	
Yes	

**Supporting Definitions:** **PCI:**

Percutaneous coronary intervention (PCI) is the placement of an angioplasty guide wire, balloon, or other device (e.g. stent, atherectomy, brachytherapy, or thrombectomy catheter) into a native coronary artery or coronary artery bypass graft for the purpose of mechanical coronary revascularization.

Source: NCDR

## C. History And Risk Factors

**Seq. #: 4040 Name:** Most Recent PCI Date**Coding Instructions:** Indicate the date of the most recent PCI.**Note(s):**

If month or day are unknown enter 01.

**Target Value:** The last value between birth and arrival at this facility**Selections:** (none)**Supporting Definitions:** (none)**Seq. #: 4045 Name:** Prior CABG**Coding Instructions:** Indicate if the patient had a previous coronary artery bypass graft (CABG) surgery.**Note(s):**

Timeframe does NOT include CABG performed after arrival.

**Target Value:** Any occurrence between birth and arrival at this facility**Selections:***Selection Text*  
No

Yes

**Supporting Definitions:** (none)**Seq. #: 4050 Name:** Most Recent CABG Date**Coding Instructions:** Indicate the date of the most recent coronary artery bypass graft (CABG) surgery.**Note(s):**

If month or day are unknown enter 01.

**Target Value:** The last value between birth and arrival at this facility**Selections:** (none)**Supporting Definitions:** (none)**Seq. #: 4055 Name:** Height**Coding Instructions:** Indicate the patient's height in centimeters.**Target Value:** The first value between arrival at this facility and discharge**Selections:** (none)**Supporting Definitions:** (none)**Seq. #: 4060 Name:** Weight**Coding Instructions:** Indicate the patient's weight in kilograms.**Target Value:** The last value between arrival at this facility and first procedure**Selections:** (none)**Supporting Definitions:** (none)

## C. History And Risk Factors

**Seq. #:** 4065    **Name:** Currently on Dialysis**Coding Instructions:** Indicate if the patient is currently undergoing either hemodialysis or peritoneal dialysis on an ongoing basis as a result of renal failure.**Note(s):**

If a patient is on receiving continuous veno-venous hemofiltration (CVVH) as a result of renal failure (and not as treatment to remove fluid for heart failure), code "yes."

**Target Value:** The value on arrival at this facility

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions:** (none)**Seq. #:** 4070    **Name:** Cerebrovascular Disease**Coding Instructions:** Indicate if the patient has a history of cerebrovascular disease.**Target Value:** Any occurrence between birth and arrival at this facility

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions: Cerebrovascular Disease:**

Cerebrovascular Disease documented by any one of the following:

1. Cerebrovascular Accident (CVA): Patient has a history of stroke, i.e., loss of neurological function with residual symptoms at least 24 hrs after onset, presumed to be from vascular etiology.
2. Transient Ischemic Attack (TIA): Patient has a history of loss of neurological function that was abrupt in onset but with complete return of function within 24 hrs, presumed to be due to vascular etiology
3. Non-invasive/invasive carotid test with > 79% occlusion.
4. Previous carotid artery surgery/intervention for carotid artery stenosis.

This does not include neurological disease processes such as metabolic and/or anoxic ischemic encephalopathy.

Source: Acute Coronary Syndromes Data Standards (JACC 2001 38: 2114 - 30), The Society of Thoracic Surgeons

## C. History And Risk Factors

**Seq. #: 4075 Name:** Peripheral Arterial Disease

**Coding Instructions:** Indicate if the patient has a history of peripheral arterial disease (PAD) (includes upper and lower extremity, renal, mesenteric, and abdominal aortic systems).

**Target Value:** Any occurrence between birth and arrival at this facility

Selections:	Selection Text	Definition
-------------	----------------	------------

	No	
--	----	--

	Yes	
--	-----	--

**Supporting Definitions: PAD:**

Peripheral arterial disease can include:

1. Claudication, either with exertion or at rest.
2. Amputation for arterial vascular insufficiency.
3. Vascular reconstruction, bypass surgery, or percutaneous intervention to the extremities (excluding dialysis fistulas and vein stripping).
4. Documented aortic aneurysm with or without repair.
5. Positive non-invasive test (e.g., ankle brachial index  $\leq 0.9$ ); ultrasound, magnetic resonance, computed tomography, or angiographic imaging of  $> 50\%$  diameter stenosis in any peripheral artery (e.g., renal, subclavian, femoral, iliac).

☐

For purposes of the Registry, peripheral arterial disease excludes disease in the carotid and cerebrovascular arteries.

Source: ACC Clinical Data Standards, The Society of Thoracic Surgeons

**Seq. #: 4080 Name:** Chronic Lung Disease

**Coding Instructions:** Indicate if the patient has a history of chronic lung disease.

**Note(s):**

A history of chronic inhalation reactive disease (asbestosis, mesothelioma, black lung disease or pneumoconiosis) qualifies as chronic lung disease. Radiation induced pneumonitis or radiation fibrosis also qualifies as chronic lung disease. A history of atelectasis is a transient condition and does not qualify.

**Target Value:** Any occurrence between birth and arrival at this facility

Selections:	Selection Text	Definition
-------------	----------------	------------

	No	
--	----	--

	Yes	
--	-----	--

**Supporting Definitions: Chronic Lung Disease:**

Chronic lung disease can include patients with chronic obstructive pulmonary disease, chronic bronchitis, or emphysema. It can also include a patient who is currently being chronically treated with inhaled or oral pharmacological therapy (e.g., beta-adrenergic agonist, anti-inflammatory agent, leukotriene receptor antagonist, or steroid). Patients with asthma or seasonal allergies are not considered to have chronic lung disease.

Source: NCDR

**Seq. #: 4085 Name:** Diabetes Mellitus

**Coding Instructions:** Indicate if the patient has a history of diabetes mellitus regardless of duration of disease or need for antidiabetic agents.

**Target Value:** Any occurrence between birth and arrival at this facility

Selections:	Selection Text	Definition
-------------	----------------	------------

	No	
--	----	--

	Yes	
--	-----	--

**Supporting Definitions: Diabetes Mellitus:**

Diabetes mellitus is diagnosed by a physician or can be defined as a fasting blood sugar greater than 7 mmol/l or 126 mg/dL. It does not include gestational diabetes.

Source: Acute Coronary Syndromes Data Standards (JACC 2001 38: 2114 - 30), The Society of Thoracic Surgeons



## C. History And Risk Factors

**Seq. #:** 4090    **Name:** Diabetes Therapy**Coding Instructions:** Indicate the most aggressive therapy the patient presented with.**Note(s):**

Patients placed on a pre-procedure diabetic pathway of insulin drip after arrival but were not on insulin therapy (treated by diet or oral method) are not coded as insulin treatment.

If a patient had a pancreatic transplant, code "other", since the insulin from the new pancreas is not exogenous insulin.

**Target Value:** The value on arrival at this facility

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	None	No treatment for diabetes
	Diet	Diet treatment only
	Oral	Oral agent treatment (includes oral agent with/without diet treatment)
	Insulin	Insulin treatment (includes any combination with insulin)
	Other	Other adjunctive treatment, non-oral/insulin/diet

**Supporting Definitions:** (none)

## D. Cath Lab Visit

Seq. #: 5000 Name: CAD Presentation

**Coding Instructions:** Indicate the patient's coronary artery disease (CAD) presentation. Choose the worst status.**Note(s):**

If the patient presents with atypical symptoms of myocardial ischemia (i.e. only shortness of breath, upper abdominal pain, left arm pain, etc.) that is known and documented to be myocardial ischemia, and is considered to be an anginal equivalent, code the selection that fits their presentation. If these symptoms are not thought to be or have not been proven to be the anginal equivalent, code "Symptom unlikely to be ischemic."

If this is a subsequent episode of care (within 7 days), do not code the CAD Presentation from the previous episode of care.

For STEMI and NSTEMI, code the highest value within 1 week of the current procedure.

If this is a repeat visit to the cath lab during the same episode of care, code the CAD presentation based on the patients clinical status prior to the subsequent procedure.

**Target Value:** The highest value between 7 days prior to arrival and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No symptom, no angina	No symptoms, No angina.
	Symptom unlikely to be ischemic	Pain, pressure or discomfort in the chest, neck or arms NOT clearly exertional or NOT otherwise consistent with pain or discomfort of myocardial ischemic origin. This includes patients with non-cardiac pain (e.g. pulmonary embolism, musculoskeletal, or esophageal discomfort), or cardiac pain not caused by myocardial ischemia (e.g., acute pericarditis).
	Stable angina	Angina without a change in frequency or pattern for the 6 weeks prior to this cath lab visit. Angina is controlled by rest and/or oral or transcutaneous medications.
	Unstable angina	There are three principal presentations of unstable angina: 1. Rest angina (occurring at rest and prolonged, usually >20 minutes); 2. New-onset angina (within the past 2 months, of at least Canadian Cardiovascular Society Class III severity); or 3. Increasing angina (previously diagnosed angina that has become distinctly more frequent, longer in duration, or increased by 1 or more Canadian Cardiovascular Society class to at least CCS III severity).
	Non-STEMI	The patient was hospitalized for a non-ST elevation myocardial infarction (STEMI) as documented in the medical record. Non-STEMIs are characterized by the presence of both criteria: a. Cardiac biomarkers (creatinine kinase-myocardial band, Troponin T or I) exceed the upper limit of normal according to the individual hospital's laboratory parameters with a clinical presentation which is consistent or suggestive of ischemia. ECG changes and/or ischemic symptoms may or may not be present. b. Absence of ECG changes diagnostic of a STEMI (see STEMI).

## D. Cath Lab Visit

ST-Elevation MI (STEMI) or equivalent

The patient presented with a ST elevation myocardial infarction (STEMI) or its equivalent as documented in the medical record. STEMI's are characterized by the presence of both criteria:

- ECG evidence of STEMI: New or presumed new ST-segment elevation or new left bundle branch block not documented to be resolved within 20 minutes. ST-segment elevation is defined by new or presumed new sustained ST-segment elevation at the J-point in two contiguous electrocardiogram (ECG) leads with the cut-off points:  $\geq 0.2$  mV in men or  $\geq 0.15$  mV in women in leads V2-V3 and/or  $\geq 0.1$  mV in other leads and lasting greater than or equal to 20 minutes. If no exact ST-elevation measurement is recorded in the medical chart, physician's written documentation of ST-elevation or Q-waves is acceptable. If only one ECG is performed, then the assumption that the ST elevation persisted at least the required 20 minutes is acceptable. Left bundle branch block (LBBB) refers to new or presumed new LBBB on the initial ECG.
- Cardiac biomarkers (creatinine kinase-myocardial band, Troponin T or I) exceed the upper limit of normal according to the individual hospital's laboratory parameters a clinical presentation which is consistent or suggestive of ischemia.

Note: For purposes of the Registry, ST elevation in the posterior chest leads (V7 through V9), or ST depression that is maximal in V1-3, without ST-segment elevation in other leads, demonstrating posterobasal myocardial infarction, is considered a STEMI equivalent and qualifies the patient for reperfusion therapy.

**Supporting Definitions:** (none)

**Seq. #: 5005 Name:** Symptom Onset Date

**Coding Instructions:** Indicate the date the patient first noted ischemic symptoms lasting greater than or equal to 10 minutes.

**Note(s):**

If the patient had intermittent ischemic symptoms, record the date and time of the most recent ischemic symptoms prior to hospital presentation. Symptoms may include jaw pain, arm pain, shortness of breath, nausea, vomiting, fatigue/malaise, or other equivalent discomfort suggestive of a myocardial infarction. In the event of stuttering symptoms, Acute Coronary Syndrome (ACS) symptom onset is the time at which symptoms became constant in quality or intensity.

**Target Value:** The first value between 1 week prior to current procedure and current procedure

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 5006 Name:** Symptom Onset Time

**Coding Instructions:** Indicate the time the patient first noted ischemic symptoms lasting greater than or equal to 10 minutes.

**Note(s):**

If an estimated symptom onset time is recorded, code "Symptom Onset Time Estimated" as "Yes."

Indicate the time (hours:minutes) using the military 24-hour clock, beginning at midnight (0000 hours).

If the symptom onset time is not specified in the medical record, it may be recorded as 0700 for morning; 1200 for lunchtime; 1500 for afternoon; 1800 for dinnertime; 2200 for evening and 0300 if awakened from sleep.

**Target Value:** The first value on Symptom Onset Date

**Selections:** (none)

**Supporting Definitions:** (none)

## D. Cath Lab Visit

**Seq. #: 5007 Name:** Symptom Onset Time Estimated**Coding Instructions:** Indicate if the symptom onset time was estimated.**Target Value:** N/A

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions:** (none)**Seq. #: 5008 Name:** Symptom Onset Time Not Available**Coding Instructions:** Indicate if the symptom onset time was not available.**Target Value:** N/A

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions:** (none)**Seq. #: 5010 Name:** Thrombolytics**Coding Instructions:** Indicate if the patient received thrombolytic therapy as an urgent treatment for STEMI.**Note(s):**

Code yes only if full dose (not partial dose) thrombolytics were administered.

**Target Value:** Any occurrence between 1 week prior to arrival at this facility and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions:** (none)**Seq. #: 5015 Name:** Thrombolytic Therapy Date**Coding Instructions:** Indicate the date of either the first bolus or the beginning of the infusion.**Note(s):**

If your facility receives a patient transfer with infusion ongoing, record the date that infusion was started at the transferring facility.

**Target Value:** The first value between 1 week prior to arrival at this facility and current procedure**Selections:** (none)**Supporting Definitions:** (none)**Seq. #: 5016 Name:** Thrombolytic Therapy Time**Coding Instructions:** Indicate the time of either the first bolus or the beginning of the infusion.**Note(s):**

If your facility receives a patient transfer with infusion ongoing, record the date that infusion was started at the transferring facility.

Indicate the time (hours:minutes) using the military 24-hour clock, beginning at midnight (0000 hours).

**Target Value:** The first value on Thrombolytic Therapy Date**Selections:** (none)**Supporting Definitions:** (none)

## D. Cath Lab Visit

**Seq. #: 5020 Name:** Anginal Classification w/in 2 Weeks**Coding Instructions:** Indicate the patients anginal classification or symptom status within the past 2 weeks.**Note(s):**

If this is a subsequent episode of care (within 2 weeks), do not code the Anginal Classification w/in 2 Weeks(5020) from the previous episode of care.

The anginal classification or symptom status is classified as the highest grade of angina or chest pain by the Canadian Cardiovascular Society Classification System (CCS).

**Target Value:** The highest value between 2 weeks prior to current procedure and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No symptoms, no angina	The patient has no symptoms, no angina.
	CCS I	Ordinary physical activity does not cause angina; for example walking or climbing stairs, angina occurs with strenuous or rapid or prolonged exertion at work or recreation.
	CCS II	Slight limitation of ordinary activity; for example, angina occurs walking or stair climbing after meals, in cold, in wind, under emotional stress or only during the few hours after awakening, walking more than two blocks on the level or climbing more than one flight of ordinary stairs at a normal pace and in normal conditions.
	CCS III	Marked limitation of ordinary activity; for example, angina occurs walking one or two blocks on the level or climbing one flight of stairs in normal conditions and at a normal pace.
	CCS IV	Inability to carry on any physical activity without discomfort - angina syndrome may be present at rest.

**Supporting Definitions:** (none)**Seq. #: 5025 Name:** Anti-Anginal Medication w/in 2 Weeks**Coding Instructions:** Indicate if the patient has taken or has been prescribed anti-anginal medication within the past 2 weeks.**Note(s):**

Code 'no' if a patient was given a sublingual, IV, or short acting formula of one of these medications.

Code 'yes' if the patient was started on an oral form of an anti-anginal medication after admission but prior to this cath lab visit.

If any anti-anginal medication was prescribed for this patient, but you are unsure if they were prescribed specifically to treat anginal symptoms, code 'yes'.

**Target Value:** Any occurrence between 2 weeks prior to current procedure and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions:** (none)**Seq. #: 5026 Name:** Beta Blockers**Coding Instructions:** Indicate if the patient has taken or has been prescribed a beta blocker to treat anginal symptoms.**Note(s):**

Code 'no' if a patient was given a sublingual, IV, or short acting formula of one of these medications.

Code 'yes' if the patient was started on an oral form of a beta-blocker after admission but prior to this cath lab visit.

If this medication was prescribed for this patient, but you are unsure if it has been prescribed specifically to treat anginal symptoms, code 'yes'.

**Target Value:** Any occurrence between 2 weeks prior to current procedure and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions:** (none)

## D. Cath Lab Visit

**Seq. #: 5027 Name:** Calcium Channel Blockers

**Coding Instructions:** Indicate if the patient has taken or has been prescribed a calcium channel blocker to treat anginal symptoms.

**Note(s):**

Code 'no' if a patient was given a sublingual, IV, or short acting formula of one of these medications.

Code 'yes' if the patient was started on an oral form of a calcium channel blocker after admission but prior to this cath lab visit.

If this medication was prescribed for this patient, but you are unsure if it has been prescribed specifically to treat anginal symptoms, code 'yes'.

**Target Value:** Any occurrence between 2 weeks prior to current procedure and current procedure

**Selections:**

Selection Text	Definition
----------------	------------

No

Yes

**Supporting Definitions:** (none)

**Seq. #: 5028 Name:** Long Acting Nitrates

**Coding Instructions:** Indicate if the patient has taken or has been prescribed long acting nitrates to treat anginal symptoms.

**Note(s):**

Nitropatch or Nitropaste are included as Long Acting Nitrates.

Code 'no' if a patient was given a sublingual, IV, or short acting formula of one of these medications.

Code 'yes' if the patient was started on an oral form of the anti-anginal medication (including Nitropaste or Nitropatch) after admission but prior to this cath lab visit.

If this medication was prescribed for this patient, but you are unsure if it has been prescribed specifically to treat anginal symptoms, code 'yes'.

**Target Value:** Any occurrence between 2 weeks prior to current procedure and current procedure

**Selections:**

Selection Text	Definition
----------------	------------

No

Yes

**Supporting Definitions:** (none)

**Seq. #: 5029 Name:** Ranolazine

**Coding Instructions:** Indicate if the patient has taken or has been prescribed Ranolazine to treat anginal symptoms.

**Note(s):**

Code 'no' if a patient was given a sublingual, IV, or short acting formula of one of these medications.

Code 'yes' if the patient was started on an oral form of Ranolazine after admission but prior to this cath lab visit.

If this medication was prescribed for this patient, but you are unsure if it has been prescribed specifically to treat anginal symptoms, code 'yes'.

**Target Value:** Any occurrence between 2 weeks prior to current procedure and current procedure

**Selections:**

Selection Text	Definition
----------------	------------

No

Yes

**Supporting Definitions:** (none)

## D. Cath Lab Visit

**Seq. #: 5030 Name:** Other Anti-Anginal Agent

**Coding Instructions:** Indicate if the patient has taken or has been prescribed any other anti-anginal medications to treat anginal symptoms.

**Note(s):**

Excludes short acting anti-anginals such as nitroglycerin sublingual tablets or spray that is used to relieve an acute episode of chest pain.

**Target Value:** Any occurrence between 2 weeks prior to current procedure and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions:** (none)

**Seq. #: 5040 Name:** Heart Failure w/in 2 Weeks

**Coding Instructions:** Indicate if there is physician documentation or report that the patient has been in a state of heart failure within the past 2 weeks.

**Note(s):**

If this is a subsequent episode of care (within 2 weeks), do not code the Heart Failure w/in 2 Weeks(5040) from the previous episode of care.

**Target Value:** Any occurrence between 2 weeks prior to current procedure and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions:** Heart failure:

Heart failure is defined as physician documentation or report of any of the following clinical symptoms of heart failure described as unusual dyspnea on light exertion, recurrent dyspnea occurring in the supine position, fluid retention; or the description of rales, jugular venous distension, pulmonary edema on physical exam, or pulmonary edema on chest x-ray presumed to be cardiac dysfunction. A low ejection fraction alone, without clinical evidence of heart failure does not qualify as heart failure.

Source: Acute Coronary Syndromes Data Standards (JACC 2001 38: 2114 - 30), The Society of Thoracic Surgeons

**Seq. #: 5045 Name:** NYHA Class w/in 2 Weeks

**Coding Instructions:** Indicate the patient's worst dyspnea or functional class, coded as the New York Heart Association (NYHA) classification within the past 2 weeks.

**Target Value:** The highest value between 2 weeks prior to current procedure and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	Class I	Patient has cardiac disease but without resulting limitations of ordinary physical activity. Ordinary physical activity (e.g., walking several blocks or climbing stairs) does not cause undue fatigue, palpitation, dyspnea, or anginal pain. Limiting symptoms may occur with marked exertion.
	Class II	Patient has cardiac disease resulting in slight limitation of ordinary physical activity. Patient is comfortable at rest. Ordinary physical activity such as walking more than two blocks or climbing more than one flight of stairs results in limiting symptoms (e.g., fatigue, palpitation, dyspnea, or anginal pain).
	Class III	Patient has cardiac disease resulting in marked limitation of physical activity. Patient is comfortable at rest. Less than ordinary physical activity (e.g., walking one to two level blocks or climbing one flight of stairs) causes fatigue, palpitation, dyspnea, or anginal pain.
	Class IV	Patient has symptoms at rest that increase with any physical activity. Patient has cardiac disease resulting in inability to perform any physical activity without discomfort. Symptoms may be present even at rest. If any physical activity is undertaken, discomfort is increased.

**Supporting Definitions:** (none)

## D. Cath Lab Visit

**Seq. #: 5050 Name:** Cardiomyopathy or Left Ventricular Systolic Dysfunction

**Coding Instructions:** Indicate if a reason for the cath lab visit is evaluation of cardiomyopathy and/or evaluation of left ventricular systolic dysfunction (i.e. depressed LV ejection fraction).

**Target Value:** Any occurrence between arrival and current procedure

Selections:	Selection Text	Definition
-------------	----------------	------------

	No	
--	----	--

	Yes	
--	-----	--

**Supporting Definitions:** (none)

**Seq. #: 5055 Name:** Pre-operative Evaluation Before Non-Cardiac Surgery

**Coding Instructions:** Indicate if a reason for the cath lab visit is pre-operative evaluation before non-cardiac surgery.

**Target Value:** Any occurrence between arrival and current procedure

Selections:	Selection Text	Definition
-------------	----------------	------------

	No	
--	----	--

	Yes	
--	-----	--

**Supporting Definitions:** (none)

**Seq. #: 5060 Name:** Cardiogenic Shock w/in 24 Hours

**Coding Instructions:** Indicate if the patient has been in a state of cardiogenic shock within 24 hrs of procedure.

**Target Value:** Any occurrence between 24 hours prior to current procedure and up to current procedure

Selections:	Selection Text	Definition
-------------	----------------	------------

	No	
--	----	--

	Yes	
--	-----	--

**Supporting Definitions:** **Cardiogenic Shock:**

Cardiogenic shock is defined as a sustained (>30 minutes) episode of systolic blood pressure <90 mm Hg, and/or cardiac index <2.2 L/min/m<sup>2</sup> determined to be secondary to cardiac dysfunction, and/or the requirement for parenteral inotropic or vasopressor agents or mechanical support (e.g., Intra aortic balloon pump (IABP), extracorporeal circulation, ventricular assist devices) to maintain blood pressure and cardiac index above those specified levels.

Note: Transient episodes of hypotension reversed with IV fluid or atropine do not constitute cardiogenic shock. The hemodynamic compromise (with or without extraordinary supportive therapy) must persist for at least 30 minutes.

Source: Acute Coronary Syndromes Data Standards (JACC 2001 38: 2114 - 30)

**Seq. #: 5065 Name:** Cardiac Arrest w/in 24 Hours

**Coding Instructions:** Indicate if the patient has had an episode of cardiac arrest within 24 hours of procedure.

**Note(s):**

Cardiac arrest includes pulseless clinical scenarios that can be brady arrests or tachy arrests requiring cardiopulmonary resuscitation (requiring two or more chest compressions, or open chest massage) and/or requiring emergency defibrillation.

**Target Value:** Any occurrence between 24 hours prior to current procedure and up to current procedure

Selections:	Selection Text	Definition
-------------	----------------	------------

	No	
--	----	--

	Yes	
--	-----	--

**Supporting Definitions:** (none)



## D. Cath Lab Visit

**Seq. #: 5100 Name:** Stress or Imaging Studies

**Coding Instructions:** Indicate if an exercise stress test, stress echocardiogram, stress testing with SPECT MPI, stress testing with CMR, cardiac CTA or coronary calcium scoring was performed.

**Note(s):**

For any subsequent procedures during this episode of care, only code new imaging or stress test results that were performed after the previous procedure until the current procedure.

**Target Value:** Any occurrence between 6 months prior to current procedure and current procedure

**Selections:**

Selection Text	Definition
No	
Yes	

**Supporting Definitions:** (none)

**Seq. #: 5200 Name:** Standard Exercise Stress Test

**Coding Instructions:** Indicate if a standard exercise stress test (without imaging) was performed.

**Target Value:** The last value between 6 months prior to current procedure and current procedure

**Selections:**

Selection Text	Definition
No	
Yes	

**Supporting Definitions:** (none)

**Seq. #: 5201 Name:** Stress Test Results

**Coding Instructions:** Indicate the results of the exercise stress test.

**Target Value:** The last value between 6 months prior to procedure and current procedure

**Selections:**

Selection Text	Definition
Negative	A stress test is negative when the electrocardiogram (ECG) is normal or not suggestive of ischemia. ECGs are not suggestive of ischemia when < 1 mm of horizontal or downsloping ST-segment depression or elevation for >= 60-80 milliseconds after the end of the QRS complex, either during or after exercise.
Positive	A stress test is positive when the electrocardiogram (ECG) suggests ischemia. ECGs suggestive of ischemia can be described as having >= 1 mm of horizontal or downsloping ST-segment depression or elevation for >= 60-80 milliseconds after the end of the QRS complex, either during or after exercise. It is also suggestive of ischemia if the patient had symptoms of ischemia (i.e. chest pain), arrhythmias, and/or a fall in blood pressure during or immediately after the procedure. If more than one study was performed with conflicting results and one study suggested coronary artery disease, code yes.
Indeterminant	The results of the stress test were indeterminant. They cannot be considered positive or negative.
Unavailable	The results of the stress test are not available.

**Supporting Definitions:** (none)

## D. Cath Lab Visit

**Seq. #: 5202 Name:** Risk/Extent of Ischemia (Stress Test)

**Coding Instructions:** Indicate the risk score of the standard exercise stress test. The risk score is derived by the Duke Treadmill score which is an exercise treadmill score that predicts prognosis in coronary artery disease. It is calculated as follows:

Treadmill score = exercise time - (5 x ST-segment deviation in millimeters\*) - (4 x treadmill angina index\*\*)

\* ST-segment deviation can be measured at 60 to 80 ms after the J point. If the amount of exercise-induced ST-segment deviation is less than 1 mm, the value entered into the score for ST deviation is 0.

\*\* The treadmill anginal index has a value of 0 if there was no exercise angina, 1 if exercise angina occurred, and 2 if angina was the reason the patient stopped exercising.

Exercise time is based on a standard Bruce protocol.

The Duke Treadmill Score was published by Daniel, Mark, et. al, in the Annals of Internal Medicine, June 1987, Vol 106, #6

**Target Value:** The last value between 6 months prior to procedure and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	Low Risk	Low-risk treadmill score (score >=5).
	Intermediate Risk	Low risk equates with a less than 1% annual mortality rate. Intermediate risk treadmill score (-11 < score < 5).
	High Risk	Intermediate risk equates with a 1-3% annual mortality rate. High risk treadmill score (score <= -11).
	Unavailable	High risk equates with a greater than 3% annual mortality rate. The results of the test are unavailable.

**Supporting Definitions:** (none)

**Seq. #: 5210 Name:** Stress Echocardiogram

**Coding Instructions:** Indicate if a stress echocardiogram was performed.

**Target Value:** The last value between 6 months prior to current procedure and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions:** (none)

**Seq. #: 5211 Name:** Stress Echo Imaging Results

**Coding Instructions:** Indicate the imaging results of the stress echocardiogram.

**Target Value:** The last value between 6 months prior to current procedure and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	Negative	The imaging study was normal. There was no change in wall motion during the procedure.
	Positive	The imaging study was abnormal. There were changes that reflected wall motion abnormalities during the procedure.
	Indeterminant	The results of the study were uninterpretable. They cannot be considered positive or negative.
	Unavailable	The results of the imaging study was not available.

**Supporting Definitions:** (none)

## D. Cath Lab Visit

**Seq. #: 5212 Name:** Risk/Extent of Ischemia (Stress Echo)**Coding Instructions:** Indicate the risk or extent of ischemia of the stress echocardiogram.**Target Value:** The last value between 6 months prior to current procedure and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
Low risk		1. Low-risk treadmill score (score $\geq 5$ ).
		2. Normal stress echocardiographic wall motion or no change of limiting resting wall motion abnormalities during stress*.
Intermediate risk		*Although the published data are limited, patients with these findings will probably not be at low risk in the presence of either a high-risk treadmill score or severe resting left ventricular dysfunction (LVEF $< 35\%$ ).
		Low risk equates with a less than 1% annual mortality rate
		1. Mild/moderate resting left ventricular dysfunction (LVEF = 35% to 49%)
High risk		2. Intermediate-risk treadmill score ( $-11 < \text{score} < 5$ ).
		3. Limited stress echocardiographic ischemia with a wall motion abnormality only at higher doses of dobutamine involving less than or equal to two segments.
		Intermediate risk equates with a 1%-3% annual mortality rate.
		1. Severe resting left ventricular dysfunction (exercise LVEF $< 35\%$ ).
		2. High-risk treadmill score (score $\leq -11$ ).
Unavailable		3. Severe exercise left ventricular dysfunction (exercise LVEF $< 35\%$ ).
		4. Echocardiographic wall motion abnormality (involving greater than two segments) developing at low dose of dobutamine ( $\leq 10$ mg/kg/min) or at a low heart rate ( $< 120$ beats/min).
		5. Stress echocardiographic evidence of extensive ischemia.
		High risk equates with a greater than 3% annual mortality rate.
		Results of test not available.

**Supporting Definitions:** (none)**Seq. #: 5220 Name:** Stress Testing with SPECT MPI**Coding Instructions:** Indicate if stress testing with single photon emission computed tomography (SPECT) myocardial perfusion imaging (MPI) was performed.**Target Value:** The last value between 6 months prior to current procedure and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
No		
Yes		

**Supporting Definitions:** (none)**Seq. #: 5221 Name:** SPECT MPI Imaging Results**Coding Instructions:** Indicate the imaging results of the SPECT MPI study.**Target Value:** The last value between 6 months prior to current procedure and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
Negative		The results of the imaging study revealed no myocardial perfusion defects.
		The result of the imaging study revealed one or more stress-induced myocardial perfusion defects.
Positive		The results of the study were uninterpretable. They cannot be considered positive or negative.
		The results of the study were not available.
Indeterminant		
Unavailable		

**Supporting Definitions:** (none)

## D. Cath Lab Visit

**Seq. #: 5222 Name:** Risk/Extent of Ischemia (SPECT MPI)**Coding Instructions:** Indicate the risk or extent of ischemia of the stress testing with SPECT MPI.**Target Value:** The last value between 6 months prior to current procedure and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
Low Risk		1. Low-risk treadmill score (score $\geq 5$ ).
		2. Normal or small myocardial perfusion defect at rest or with stress.*
		*Although the published data are limited, patients with these findings will probably not be at low risk in the presence of either a high-risk treadmill score or severe resting left ventricular dysfunction (LVEF $< 35\%$ ).
Intermediate Risk		Low risk equates with a less than 1% annual mortality rate.
		1. Mild/moderate resting left ventricular dysfunction (LVEF=35% to 49%).
		2. Intermediate-risk treadmill score ( $-11 < \text{score} < 5$ )
		3. Stress-induced moderate perfusion defect without LV dilation or increased lung intake (thallium-201)
High Risk		Intermediate risk equates with a 1%-3% annual mortality rate.
		1. Severe resting left ventricular dysfunction (exercise LVEF $< 35\%$ )
		2. High-risk treadmill score (score $\leq -11$ )
		3. Severe exercise left ventricular dysfunction (exercise LVEF $< 35\%$ )
		4. Stress-induced large perfusion defect (particularly if anterior)
		5. Stress-induced multiple perfusion defects of moderate size
		6. Large, fixed perfusion defect with LV dilation or increased lung uptake (thallium-201)
		7. Stress-induced moderate perfusion defect with LV dilation or increased lung uptake (thallium-201)
Unavailable		High risk equates with a greater than 3% annual mortality rate.
		The results of the study were not available.

**Supporting Definitions:** (none)**Seq. #: 5230 Name:** Stress Test with CMR**Coding Instructions:** Indicate if a stress test with cardiac magnetic resonance (CMR) was performed.**Target Value:** The last value between 6 months prior to current procedure and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
No		
Yes		

**Supporting Definitions:** (none)

## D. Cath Lab Visit

**Seq. #: 5231 Name:** CMR Imaging Results**Coding Instructions:** Indicate the imaging results of the cardiac magnetic resonance (CMR) study.**Target Value:** The last value between 6 months prior to current procedure and prior to procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	Negative	The results of the imaging study revealed no myocardial perfusion defects.
	Positive	The result of the imaging study revealed one or more stress-induced myocardial perfusion defects.
	Indeterminant	The results of the study were uninterpretable. They cannot be considered positive or negative.
	Unavailable	The results of the study were not available.

**Supporting Definitions:** (none)**Seq. #: 5232 Name:** Risk/Extent of Ischemia (Stress Test with CMR)**Coding Instructions:** Indicate the risk or extent of ischemia of the stress test with cardiac magnetic resonance (CMR).**Target Value:** The last value between 6 months prior to current procedure and prior to procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	Low Risk	<ol style="list-style-type: none"> <li>1. Low-risk treadmill score (score <math>\geq 5</math>).</li> <li>2. Normal or small myocardial perfusion defect at rest or with stress.*</li> </ol> <p>*Although the published data are limited, patients with these findings will probably not be at low risk in the presence of either a high-risk treadmill score or severe resting left ventricular dysfunction (LVEF <math>&lt;35\%</math>).</p> <p>Low risk equates with a less than 1% annual mortality rate.</p>
	Intermediate Risk	<ol style="list-style-type: none"> <li>1. Mild/moderate resting left ventricular dysfunction (LVEF=35% to 49%).</li> <li>2. Intermediate-risk treadmill score (<math>-11 &lt; \text{score} &lt; 5</math>)</li> <li>3. Stress-induced moderate perfusion defect without LV dilation or increased lung intake (thallium-201)</li> </ol> <p>Intermediate risk equates with a 1%-3% annual mortality rate.</p>
	High Risk	<ol style="list-style-type: none"> <li>1. Severe resting left ventricular dysfunction (exercise LVEF <math>&lt;35\%</math>)</li> <li>2. High-risk treadmill score (score <math>\leq -11</math>)</li> <li>3. Severe exercise left ventricular dysfunction (exercise LVEF <math>&lt;35\%</math>)</li> <li>4. Stress-induced large perfusion defect (particularly if anterior)</li> <li>5. Stress-induced multiple perfusion defects of moderate size</li> <li>6. Large, fixed perfusion defect with LV dilation or increased lung uptake (thallium-201)</li> <li>7. Stress-induced moderate perfusion defect with LV dilation or increased lung uptake (thallium-201)</li> </ol> <p>High risk equates with a greater than 3% annual mortality rate.</p>
	Unavailable	The results of the study were not available.

**Supporting Definitions:** (none)

## D. Cath Lab Visit

**Seq. #: 5240 Name: Cardiac CTA****Coding Instructions:** Indicate if a cardiac computerized tomographic angiography (CTA) was performed.**Target Value:** The last value between 6 months prior to current procedure and current procedure

Selections:	Selection Text	Definition
	No	
	Yes	

**Supporting Definitions:** (none)**Seq. #: 5241 Name: Cardiac CTA Results****Coding Instructions:** Indicate the results of the cardiac computerized tomographic angiography (CTA).**Note(s):**

For purposes of coding the results of a cardiac CTA, a coronary artery is defined as one of the 3 major vessels of the heart. These vessels are the right coronary artery, the left anterior descending coronary artery and the circumflex coronary artery and their associated branches. A left main coronary artery with stenosis  $\geq 50\%$  is considered two vessel disease because it feeds both the left anterior descending and circumflex arteries.

**Target Value:** The last value between 6 months prior to current procedure and current procedure

Selections:	Selection Text	Definition
	No disease	There was $<50\%$ stenosis in all coronary artery branches.
	1 Vessel disease	There was $\geq 50\%$ stenosis in one coronary artery.
	2 Vessel disease	There was $\geq 50\%$ stenosis in two coronary arteries (or $\geq 50\%$ stenosis in the left main coronary artery).
	3 Vessel disease	There was $\geq 50\%$ stenosis in three coronary arteries (or $\geq 50\%$ stenosis in the left main coronary artery and $\geq 50\%$ stenosis in the right coronary artery).
	Indeterminant	The results of the study were uninterpretable due to technical or patient-related issues.
	Unavailable	The results of the study were unavailable.

**Supporting Definitions:** (none)**Seq. #: 5250 Name: Coronary Calcium Score****Coding Instructions:** Indicate if a coronary calcium score is available.**Target Value:** The last value between 6 months prior to current procedure and current procedure

Selections:	Selection Text	Definition
	No	
	Yes	

**Supporting Definitions:** (none)**Seq. #: 5251 Name: Calcium Score****Coding Instructions:** Indicate the coronary calcium score.**Target Value:** The last value between 6 months prior to current procedure and current procedure**Selections:** (none)**Supporting Definitions:** (none)

## D. Cath Lab Visit

**Seq. #: 5300 Name:** Date of Procedure**Coding Instructions:** Indicate the date of the procedure.**Target Value:** N/A**Selections:** (none)**Supporting Definitions:** (none)**Seq. #: 5301 Name:** Time of Procedure**Coding Instructions:** Indicate the time the procedure(s) was initiated.**Note(s):**

Indicate the time (hours:minutes) using the military 24-hour clock, beginning at midnight (0000 hours).

If an arterial sheath is already in place, use the time of the introduction of a catheter or the time the sheath was exchanged.

**Target Value:** N/A**Selections:** (none)**Supporting Definitions: Time of Procedure:**

The time the procedure started is defined as the time at which local anesthetic was first administered for vascular access, or the time of the first attempt at vascular access for the cardiac catheterization (use whichever is earlier).

Source: NCDR

**Seq. #: 5305 Name:** PCI**Coding Instructions:** Indicate if the patient had a percutaneous coronary intervention (PCI).**Target Value:** N/A**Selections:**

No

Yes

**Supporting Definitions: PCI:**

A percutaneous coronary intervention (PCI) is the placement of an angioplasty guide wire, balloon, or other device (e.g. stent, atherectomy, brachytherapy, or thrombectomy catheter) into a native coronary artery or coronary artery bypass graft for the purpose of mechanical coronary revascularization.

Source: NCDR

**Seq. #: 5310 Name:** Diagnostic Cath**Coding Instructions:** Indicate if the patient had a left heart catheterization or diagnostic coronary angiography procedure at this facility.**Target Value:** N/A**Selections:**

No

Yes

**Supporting Definitions:** (none)

## D. Cath Lab Visit

**Seq. #: 5315 Name:** Other Procedure (in conj w/Dx Cath or PCI)

**Coding Instructions:** Indicate if an "other procedure" was performed in conjunction with a left heart cath, diagnostic coronary angiography, or PCI procedure.

**Note(s):**

Other procedures include, but are not limited to right heart caths, EtOH ablations, septal closures, and other (renal, abdominal, peripheral or carotid) angiograms and/or endovascular interventions.

The intent of "other procedure" is to capture those procedures that would add additional fluoro time and/or contrast volume to the diagnostic cath and/or PCI procedure.

Do not code "other procedure" unless the procedure is performed in conjunction with a left heart cath, diagnostic coronary angiography, or PCI procedure.

**Target Value:** N/A

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions:** (none)

**Seq. #: 5320 Name:** Fluoroscopy Time

**Coding Instructions:** Indicate the total fluoroscopy time recorded to the nearest 0.1-minute. The time recorded should include the total time for the lab visit.

**Note(s):**

It is acceptable to code either Fluoroscopy Time (5320) or Fluoroscopy Dose (5321) or both.

**Target Value:** The total between start of procedure and end of procedure

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 5321 Name:** Fluoroscopy Dose

**Coding Instructions:** Indicate the total fluoroscopy dose to the nearest integer in milligrays (mGy). The value recorded should include the total dose for the lab visit.

**Note(s):**

It is acceptable to code either Fluoroscopy Time (5320) or Fluoroscopy Dose (5321) or both.

The dose recorded should include the total dose for the lab visit.

One gray is the absorption of one joule of radiation energy by one kilogram of matter

**Target Value:** The total between start of procedure and end of procedure

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 5325 Name:** Contrast Volume

**Coding Instructions:** Indicate the volume of contrast (ionic and non-ionic) used in milliliters (ml). The volume recorded should be the total volume for the lab visit.

**Target Value:** The total between start of procedure and end of procedure

**Selections:** (none)

**Supporting Definitions:** (none)



## D. Cath Lab Visit

**Seq. #: 5330 Name: IABP**

**Coding Instructions:** Indicate if the patient required the use of an Intra-Aortic Balloon Pump (IABP).

**Target Value:** Any occurrence between start of procedure and end of procedure

Selections:	Selection Text	Definition
	No	
	Yes	

**Supporting Definitions:** (none)

**Seq. #: 5335 Name: IABP Timing**

**Coding Instructions:** Indicate when the Intra-Aortic Balloon Pump was placed.

**Target Value:** The first value between start of procedure and end of procedure

Selections:	Selection Text	Definition
	In place at start of procedure	An intra-aortic balloon pump was in place at the start of the procedure.
	Inserted during procedure and prior to PCI	An intra-aortic balloon pump was inserted during the procedure, but prior to the PCI procedure.
	Inserted after PCI has begun	An intra-aortic balloon pump was inserted after the PCI procedure begun.

**Supporting Definitions:** (none)

**Seq. #: 5340 Name: Other Mechanical Ventricular Support**

**Coding Instructions:** Indicate if the patient required the use of other mechanical ventricular support. This includes use of cardiopulmonary bypass, left ventricular assist device (LVAD) and/or extracorporeal membrane oxygenation (ECMO).

**Target Value:** Any occurrence between start of procedure and end of procedure

Selections:	Selection Text	Definition
	No	
	Yes	

**Supporting Definitions:** (none)

**Seq. #: 5345 Name: Other Mechanical Ventricular Support Timing**

**Coding Instructions:** Indicate when the other mechanical ventricular support was placed.

**Target Value:** The first value between start of procedure and end of procedure

Selections:	Selection Text	Definition
	In place at start of procedure	Mechanical ventricular support was in place at the start of the procedure.
	Inserted during procedure and prior to PCI	Mechanical ventricular support was inserted during the procedure, but prior to the PCI.
	Inserted after PCI has begun	Mechanical ventricular support was inserted after the PCI begun.

**Supporting Definitions:** (none)

**Seq. #: 5350 Name: Arterial Access Site**

**Coding Instructions:** Indicate the primary location of percutaneous entry. Code the site used to perform the majority of the procedure if more than one site was used.

**Target Value:** The last value on current procedure

Selections:	Selection Text	Definition
	Femoral	Either a cutdown or percutaneous puncture of either femoral artery.
	Brachial	Either a cutdown or percutaneous puncture of either brachial artery
	Radial	Percutaneous radial approach.
	Other	Entry other than femoral, brachial, or radial approaches to the arterial system.

**Supporting Definitions:** (none)

## D. Cath Lab Visit

**Seq. #: 5355 Name:** Arterial Access Closure Method

**Coding Instructions:** Indicate the arterial closure methods used in chronological order regardless of whether or not they provided hemostasis. The same closure method may be repeated.

**Target Value:** The total between start of procedure and discharge

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 5356 Name:** Closure Method Not Documented

**Coding Instructions:** Indicate if the method to close the arterial access site was not documented.

**Target Value:** Any occurrence between current procedure and discharge

**Selections:**

<i>Selection Text</i>	<i>Definition</i>
No	
Yes	

**Supporting Definitions:** (none)

**Seq. #: 5360 Name:** Closure Device Counter

**Coding Instructions:** The software assigned closure device counter should start at 1 and be incremented by one for each closure device used during or after the cath lab visit.

**Note(s):**

The closure device counter number should be assigned sequentially in ascending order. Do not skip numbers.

The closure device counter is reset back to 1 for each new cath lab visit.

**Target Value:** N/A

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 5400 Name:** Auxiliary 3

**Coding Instructions:** Reserved for future use.

**Target Value:** N/A

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 5405 Name:** Auxiliary 4

**Coding Instructions:** Reserved for future use.

**Target Value:** N/A

**Selections:** (none)

**Supporting Definitions:** (none)

## E. Diagnostic Cath

**Seq. #:** 6000 **Name:** Diagnostic Cath Operator Last Name**Coding Instructions:** Indicate the diagnostic catheterization operator's last name.**Note(s):**

If the name exceeds 50 characters, enter the first 50 letters only.

**Target Value:** The value on current procedure**Selections:** (none)**Supporting Definitions:** (none)**Seq. #:** 6005 **Name:** Diagnostic Cath Operator First Name**Coding Instructions:** Indicate the diagnostic catheterization operator's first name.**Note(s):**

If the name exceeds 50 characters, enter the first 50 letters only.

**Target Value:** The value on current procedure**Selections:** (none)**Supporting Definitions:** (none)**Seq. #:** 6010 **Name:** Diagnostic Cath Operator Middle Name**Coding Instructions:** Indicate the diagnostic catheterization operator's middle name.**Note(s):**

If the name exceeds 50 characters, enter the first 50 letters only.

**Target Value:** The value on current procedure**Selections:** (none)**Supporting Definitions:** (none)**Seq. #:** 6015 **Name:** Diagnostic Cath Operator NPI**Coding Instructions:** Indicate the primary diagnostic cath operator's National Provider Identifier. NPIs, assigned by the Center for Medicare and Medicaid Services (CMS), are used to uniquely identify physicians for Medicare billing purposes.**Target Value:** The value on current procedure**Selections:** (none)**Supporting Definitions:** (none)**Seq. #:** 6020 **Name:** Diagnostic Coronary Angiography Procedure**Coding Instructions:** Indicate if the patient had a diagnostic coronary angiography procedure.**Target Value:** N/A**Selections:**

Selection Text

Definition

No

Yes

**Supporting Definitions:** **Diagnostic Coronary Angiography:**

Diagnostic coronary angiography is defined as the passage of a catheter into the aortic root or other great vessels for the purpose of angiography of the native coronary arteries or bypass grafts supplying native coronary arteries.

Source: NCDR

## E. Diagnostic Cath

**Seq. #: 6025 Name:** Left Heart Cath Procedure

**Coding Instructions:** Indicate if the patient had a left heart cath procedure, defined as the passage of a catheter into the left ventricle for the purposes of angiography or measurement of ventricular pressures and/or oxygen saturation.

**Target Value:** N/A

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions:** (none)

**Seq. #: 6030 Name:** Cardiac Transplant Evaluation

**Coding Instructions:** Indicate if a reason for the cath lab visit is evaluation for, or routine follow-up after an organ transplant.

**Target Value:** Any occurrence between arrival and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions:** (none)

**Seq. #: 6035 Name:** Cardiac Transplant Type

**Coding Instructions:** Indicate if the reason for the cath lab visit is evaluation for, or routine follow-up after a cardiac transplant.

**Target Value:** Any occurrence between arrival and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	Donor for cardiac transplant	
	Candidate to receive a cardiac transplant	
	Post-cardiac transplant follow-up	

**Supporting Definitions:** (none)

**Seq. #: 6040 Name:** Diagnostic Cath Status

**Coding Instructions:** Indicate the status of the diagnostic catheterization. The status is determined when the decision is made to activate the cath lab.

**Target Value:** The highest value on current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	Elective	The procedure can be performed on an outpatient basis or during a subsequent hospitalization without significant risk of infarction or death. For stable inpatients, the procedure is being performed during this hospitalization for convenience and ease of scheduling and NOT because the patient's clinical situation demands the procedure prior to discharge.
	Urgent	The procedure is being performed on an inpatient basis and prior to discharge because of significant concerns that there is risk of ischemia, infarction and/or death. Patients who are outpatients or in the emergency department at the time that the cardiac catheterization is requested would warrant an admission based on their clinical presentation.
	Emergency	The procedure is being performed as soon as possible because of substantial concerns that ongoing ischemia and/or infarction could lead to death. "As soon as possible" refers to a patient who is of sufficient acuity that you would cancel a scheduled case to perform this procedure immediately in the next available room during business hours, or you would activate the on call team were this to occur during off-hours.
	Salvage	The procedure is a last resort. The patient is in cardiogenic shock at the start of the procedure. Within the last ten minutes prior to the start of the procedure the patient has also received chest compressions for a total of at least sixty seconds or has been on unanticipated extracorporeal circulatory support (e.g. extracorporeal membrane oxygenation, cardiopulmonary support)

**Supporting Definitions:** (none)

## E. Diagnostic Cath

**Seq. #:** 6045    **Name:** Rx Recommendation**Coding Instructions:** Indicate the primary treatment that was recommended as a result of the diagnostic cath.**Target Value:** Any occurrence on current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	None	Due to the outcome of the cath, no treatment recommendations were required.
	Medical therapy and/or counseling	Medical therapy and/or counseling refers to patients who only receive pharmacologic therapy and/or recommendations for cardiac risk factor reduction.
	PCI without planned CABG	
	CABG	Includes both CABG and planned hybrid CABG/PCI procedures.
	Other cardiac therapy without CABG or PCI	Other cardiac therapy includes any procedure or intervention (not including PCI, CABG, and not receiving only medical/pharmacological therapy).

**Supporting Definitions:** (none)

## F. Coronary Anatomy

**Seq. #: 6100 Name:** Dominance**Coding Instructions:** Indicate the dominance of the coronary anatomy (whether the posterior descending artery comes from the right or left vessel system).**Target Value:** Any occurrence between 1 month prior to current procedure and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	Left	The posterior descending artery (PDA) and posterolateral artery (PLA) arises from the left circumflex artery.
	Right	The posterior descending artery (PDA) and posterolateral artery (PLA) arises from the right coronary artery.
	Co-dominant	The right coronary artery supplies the posterior descending artery (PDA) and the circumflex supplies the posterolateral artery (PLA). Thus, there is approximately equal contribution to the inferior surface of the left ventricle from both the left circumflex and right coronary arteries.

**Supporting Definitions:** (none)**Seq. #: 6110 Name:** Left Main Stenosis Percent**Coding Instructions:** Indicate the best estimate of most severe percent stenosis in the left main coronary artery.**Note(s):**

If no stenosis, enter 0%.

If the patient has only a PCI (without a diagnostic cath in the same lab visit) it is acceptable to use prior cath lab visit information, when coding coronary stenosis, as long as there have been no changes in coronary anatomy. This includes stenosis determined via cardiac catheterization at another facility.

This does not include collaterals.

**Target Value:** The highest value between 1 month prior to current procedure and current procedure**Selections:** (none)**Supporting Definitions: Stenosis:**

Stenosis: Stenosis represents the percentage diameter reduction, ranging from 0 to 100, associated with the identified vessels. Percent stenosis at its maximal point is estimated to be the amount of reduction in the diameter of the "normal" reference vessel proximal to the lesion. In instances where multiple lesions are present, enter the single highest percent stenosis noted.

Source: NCDR

**Seq. #: 6111 Name:** Left Main Not Available**Coding Instructions:** Indicate if best estimate of percent stenosis in the left main coronary artery is not available.**Target Value:** N/A

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions:** (none)

## F. Coronary Anatomy

**Seq. #: 6120 Name:** Proximal LAD Stenosis Percent

**Coding Instructions:** Indicate the best estimate of most severe percent stenosis in the proximal left anterior descending (LAD) coronary artery. This does not include collateral circulation.

**Note(s):**

If the patient has only a PCI (without a diagnostic cath in the same lab visit) it is acceptable to use prior cath lab visit information, when coding coronary stenosis, as long as there have been no changes in coronary anatomy. This includes stenosis determined via cardiac catheterization at another facility.

If no stenosis, enter 0%.

This does not include collaterals.

**Target Value:** The highest value between 1 month prior to current procedure and current procedure

**Selections:** (none)

**Supporting Definitions: Stenosis:**

Stenosis: Stenosis represents the percentage diameter reduction, ranging from 0 to 100, associated with the identified vessels. Percent stenosis at its maximal point is estimated to be the amount of reduction in the diameter of the "normal" reference vessel proximal to the lesion. In instances where multiple lesions are present, enter the single highest percent stenosis noted.

Source: NCDR

**Seq. #: 6121 Name:** Proximal LAD Not Available

**Coding Instructions:** Indicate if best estimate of percent stenosis in the proximal left anterior descending coronary artery branches is not available.

**Target Value:** N/A

**Selections:**

Selection Text	Definition
No	
Yes	

**Supporting Definitions:** (none)

**Seq. #: 6130 Name:** Mid/Distal LAD, Diag Branches Stenosis Percent

**Coding Instructions:** Indicate the best estimate of most severe percent stenosis in the mid/distal left anterior descending (LAD), including all diagonal coronary artery branches that are  $\geq 2.0$  mm in diameter as determined by angiography.

**Note(s):**

The mid LAD is considered to be the LAD starting at the 1st diagonal vessel.

If the patient has only a PCI (without a diagnostic cath in the same lab visit) it is acceptable to use prior cath lab visit information, when coding coronary stenosis, as long as there have been no changes in coronary anatomy. This includes stenosis determined via cardiac catheterization at another facility.

If no stenosis, enter 0%.

This does not include collaterals.

**Target Value:** The highest value between 1 month prior to current procedure and current procedure

**Selections:** (none)

**Supporting Definitions: Stenosis:**

Stenosis: Stenosis represents the percentage diameter reduction, ranging from 0 to 100, associated with the identified vessels. Percent stenosis at its maximal point is estimated to be the amount of reduction in the diameter of the "normal" reference vessel proximal to the lesion. In instances where multiple lesions are present, enter the single highest percent stenosis noted.

Source: NCDR

## F. Coronary Anatomy

**Seq. #: 6131 Name:** Mid/Distal LAD, Diagonals Stenosis Not Available**Coding Instructions:** Indicate if best estimate of percent stenosis in the mid/distal left anterior descending (LAD) coronary artery including all diagonal coronary artery branches is not available.**Target Value:** N/A**Selections:**

No

Yes

**Supporting Definitions:** (none)**Seq. #: 6140 Name:** CIRC, OMs, LPDA, LPL Branches Stenosis Percent**Coding Instructions:** Indicate the best estimate of most severe percent stenosis in the circumflex (CIRC), obtuse marginals (OMs), and depending on dominance, the left posterolateral (LPL) and left posterior descending artery (LPDA) branches of  $\geq 2.0$  mm in diameter as determined by angiography.**Note(s):**

If the patient has only a PCI (without a diagnostic cath in the same lab visit) it is acceptable to use prior cath lab visit information, when coding coronary stenosis, as long as there have been no changes in coronary anatomy. This includes stenosis determined via cardiac catheterization at another facility.

This does not include collaterals.

If no stenosis, enter 0%.

**Target Value:** The highest value between 1 month prior to current procedure and current procedure**Selections:** (none)**Supporting Definitions: Stenosis:**

Stenosis: Stenosis represents the percentage diameter reduction, ranging from 0 to 100, associated with the identified vessels. Percent stenosis at its maximal point is estimated to be the amount of reduction in the diameter of the "normal" reference vessel proximal to the lesion. In instances where multiple lesions are present, enter the single highest percent stenosis noted.

Source: NCDR

**Seq. #: 6141 Name:** CIRC, OMs, LPDL, LPL Branches Stenosis Not Available**Coding Instructions:** Indicate if best estimate of percent stenosis in the circumflex (CIRC), obtuse marginals (OMs), the left posterolateral (LPL) and/or left posterior descending artery (LPDA) branches is not available.**Target Value:** N/A**Selections:**

No

Yes

**Supporting Definitions:** (none)



## F. Coronary Anatomy

**Seq. #:** 6150 **Name:** RCA, RPDA, RPL, AM Branches Stenosis Percent

**Coding Instructions:** Indicate the best estimate of most severe percent stenosis in the right coronary artery (RCA), acute marginal (AM) branches, and depending on dominance, the right posterior descending artery (RPDA), and right posteriolateral (RPL) branches of  $\geq 2.0$  mm in diameter as determined by angiography.

**Note(s):**

If the patient has only a PCI (without a diagnostic cath in the same lab visit) it is acceptable to use prior cath lab visit information, when coding coronary stenosis, as long as there have been no changes in coronary anatomy. This includes stenosis determined via cardiac catheterization at another facility.

This does not include collaterals.

If no stenosis, enter 0%.

**Target Value:** The highest value between 1 month prior to current procedure and current procedure

**Selections:** (none)

**Supporting Definitions: Stenosis:**

Stenosis: Stenosis represents the percentage diameter reduction, ranging from 0 to 100, associated with the identified vessels. Percent stenosis at its maximal point is estimated to be the amount of reduction in the diameter of the "normal" reference vessel proximal to the lesion. In instances where multiple lesions are present, enter the single highest percent stenosis noted.

Source: NCDR

**Seq. #:** 6151 **Name:** RCA, RPDA, RPL, AM Branches Stenosis Not Available

**Coding Instructions:** Indicate if the best estimate of percent stenosis in the right coronary artery (RCA), right posterior descending artery (RPDA), right posteriolateral (RPL) branches, and acute marginal (AM) branches is not available.

**Target Value:** N/A

**Selections:**

Selection Text	Definition
----------------	------------

No

Yes

**Supporting Definitions:** (none)

**Seq. #:** 6160 **Name:** Ramus Stenosis Percent

**Coding Instructions:** Indicate the best estimate of most severe percent stenosis in the ramus artery (if present) of  $\geq 2.0$  mm in diameter as determined by angiography.

**Note(s):**

If the patient has only a PCI (without a diagnostic cath in the same lab visit) it is acceptable to use prior cath lab visit information, when coding coronary stenosis, as long as there have been no changes in coronary anatomy. This includes stenosis determined via cardiac catheterization at another facility.

This does not include collaterals.

If no stenosis, enter 0%

**Target Value:** The highest value between 1 month prior to current procedure and current procedure

**Selections:** (none)

**Supporting Definitions: Stenosis:**

Stenosis: Stenosis represents the percentage diameter reduction, ranging from 0 to 100, associated with the identified vessels. Percent stenosis at its maximal point is estimated to be the amount of reduction in the diameter of the "normal" reference vessel proximal to the lesion. In instances where multiple lesions are present, enter the single highest percent stenosis noted.

Source: NCDR

## F. Coronary Anatomy

**Seq. #: 6161 Name:** Ramus Stenosis Not Available**Coding Instructions:** Indicate if the best estimate of percent stenosis in the ramus artery is not available, or the ramus is not present.**Target Value:** N/A

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions:** (none)**Seq. #: 6170 Name:** Proximal LAD Graft Stenosis Percent**Coding Instructions:** Indicate the best estimate of most severe percent stenosis in a graft supplying the proximal left anterior descending (LAD) coronary artery branch territory as determined by angiography. If no stenosis, enter 0%.**Note(s):**

Leave blank if CABG Date is greater than Procedure Date/Time or Prior CABG is "No".

If the patient has only a PCI (without a diagnostic cath in the same lab visit) it is acceptable to use prior cath lab visit information, when coding coronary stenosis, as long as there have been no changes in coronary anatomy. This includes stenosis determined via cardiac catheterization at another facility.

If no stenosis, enter 0%.

**Target Value:** The highest value between 1 month prior to current procedure and current procedure**Selections:** (none)**Supporting Definitions: Stenosis:**

Stenosis: Stenosis represents the percentage diameter reduction, ranging from 0 to 100, associated with the identified vessels. Percent stenosis at its maximal point is estimated to be the amount of reduction in the diameter of the "normal" reference vessel proximal to the lesion. In instances where multiple lesions are present, enter the single highest percent stenosis noted.

Source: NCDR

**Seq. #: 6171 Name:** Proximal LAD Graft Stenosis Not Available**Coding Instructions:** Indicate if the best estimate of percent stenosis in a graft supplying the proximal left anterior descending (LAD) coronary artery branch territory is not available.**Target Value:** N/A

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions:** (none)

## F. Coronary Anatomy

**Seq. #: 6180 Name:** Mid/Distal LAD, Diag Branches Graft Stenosis Percent**Coding Instructions:** Indicate the best estimate of most severe percent stenosis in a graft supplying the mid/distal left anterior descending (LAD) coronary artery territory, including all diagonal branches, as determined by angiography.**Note(s):**

Leave blank if CABG Date is greater than Procedure Date/Time or Prior CABG is "No".

If the patient has only a PCI (without a diagnostic cath in the same lab visit) it is acceptable to use prior cath lab visit information, when coding coronary stenosis, as long as there have been no changes in coronary anatomy. This includes stenosis determined via cardiac catheterization at another facility.

If no stenosis, enter 0%.

**Target Value:** The highest value between 1 month prior to current procedure and current procedure**Selections:** (none)**Supporting Definitions: Stenosis:**

Stenosis: Stenosis represents the percentage diameter reduction, ranging from 0 to 100, associated with the identified vessels. Percent stenosis at its maximal point is estimated to be the amount of reduction in the diameter of the "normal" reference vessel proximal to the lesion. In instances where multiple lesions are present, enter the single highest percent stenosis noted.

Source: NCDR

**Seq. #: 6181 Name:** Mid/Distal LAD, Diag Branches Graft Stenosis Not Available**Coding Instructions:** Indicate if the best estimate of percent stenosis in a graft supplying the mid/distal left anterior descending (LAD) coronary artery territory, including all diagonal branches, is not available.**Target Value:** N/A**Selections:**

No

Yes

**Supporting Definitions:** (none)**Seq. #: 6190 Name:** CIRC, OMs, LPDA, LPL Branches Graft Stenosis Percent**Coding Instructions:** Indicate the best estimate of most severe percent stenosis in a graft supplying the circumflex coronary artery territory as determined by angiography.**Note(s):**

Leave blank if CABG Date is greater than Procedure Date/Time or Prior CABG is "No".

If the patient has only a PCI (without a diagnostic cath in the same lab visit) it is acceptable to use prior cath lab visit information, when coding coronary stenosis, as long as there have been no changes in coronary anatomy. This includes stenosis determined via cardiac catheterization at another facility.

If no stenosis, enter 0%.

**Target Value:** The highest value between 1 month prior to current procedure and current procedure**Selections:** (none)**Supporting Definitions: Stenosis:**

Stenosis: Stenosis represents the percentage diameter reduction, ranging from 0 to 100, associated with the identified vessels. Percent stenosis at its maximal point is estimated to be the amount of reduction in the diameter of the "normal" reference vessel proximal to the lesion. In instances where multiple lesions are present, enter the single highest percent stenosis noted.

Source: NCDR

## F. Coronary Anatomy

**Seq. #:** 6191 **Name:** CIRC, OMs, LPDA, LPL Branches Graft Stenosis Not Available**Coding Instructions:** Indicate if the best estimate of percent stenosis in a graft supplying the circumflex coronary artery territory is not available.**Target Value:** N/A**Selections:**

No

Yes

**Supporting Definitions:** (none)**Seq. #:** 6200 **Name:** RCA, RPDA, RPL, AM Branches Graft Stenosis Percent**Coding Instructions:** Indicate the best estimate of most severe percent stenosis in a graft supplying the right coronary artery territory as determined by angiography.**Note(s):**

Leave blank if CABG Date is greater than Procedure Date/Time or Prior CABG is "No".

If the patient has only a PCI (without a diagnostic cath in the same lab visit) it is acceptable to use prior cath lab visit information, when coding coronary stenosis, as long as there have been no changes in coronary anatomy. This includes stenosis determined via cardiac catheterization at another facility.

If no stenosis, enter 0%.

**Target Value:** The highest value between 1 month prior to current procedure and current procedure**Selections:** (none)**Supporting Definitions:** **Stenosis:**

Stenosis: Stenosis represents the percentage diameter reduction, ranging from 0 to 100, associated with the identified vessels. Percent stenosis at its maximal point is estimated to be the amount of reduction in the diameter of the "normal" reference vessel proximal to the lesion. In instances where multiple lesions are present, enter the single highest percent stenosis noted.

Source: NCDR

**Seq. #:** 6201 **Name:** RCA, RPDA, RPL, AM Branches Graft Stenosis Not Available**Coding Instructions:** Indicate if the best estimate of percent stenosis in a graft supplying the right coronary artery territory is not available.**Target Value:** N/A**Selections:**

No

Yes

**Supporting Definitions:** (none)

## F. Coronary Anatomy

**Seq. #: 6210 Name:** Ramus Graft Stenosis Percent

**Coding Instructions:** Indicate the best estimate of most severe percent stenosis supplying a graft to the ramus coronary artery as determined by angiography.

**Note(s):**

Leave blank if CABG Date is greater than Procedure Date/Time or Prior CABG is "No".

If the patient has only a PCI (without a diagnostic cath in the same lab visit) it is acceptable to use prior cath lab visit information, when coding coronary stenosis, as long as there have been no changes in coronary anatomy. This includes stenosis determined via cardiac catheterization at another facility

If no stenosis, enter 0%.

**Target Value:** The highest value between 1 month prior to current procedure and current procedure

**Selections:** (none)

**Supporting Definitions: Stenosis:**

Stenosis: Stenosis represents the percentage diameter reduction, ranging from 0 to 100, associated with the identified vessels. Percent stenosis at its maximal point is estimated to be the amount of reduction in the diameter of the "normal" reference vessel proximal to the lesion. In instances where multiple lesions are present, enter the single highest percent stenosis noted.

Source: NCDR

**Seq. #: 6211 Name:** Ramus Graft Stenosis Not Available

**Coding Instructions:** Indicate if the best estimate of percent stenosis in a graft supplying the ramus coronary artery is not available.

**Target Value:** N/A

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions:** (none)

## G. PCI Procedure

---

**Seq. #:** 7000    **Name:** PCI Operator Last Name**Coding Instructions:** Indicate the PCI operator's last name. If the name exceeds 50 characters, enter the first 50 letters only.**Target Value:** The value on current procedure**Selections:** (none)**Supporting Definitions:** (none)

---

**Seq. #:** 7005    **Name:** PCI Operator First Name**Coding Instructions:** Indicate the PCI operator's first name. If the name exceeds 50 characters, enter the first 50 letters only.**Target Value:** The value on current procedure**Selections:** (none)**Supporting Definitions:** (none)

---

**Seq. #:** 7010    **Name:** PCI Operator Middle Name**Coding Instructions:** PCI operator's middle name. If the name exceeds 50 characters, enter the first 50 letters only.**Target Value:** The value on current procedure**Selections:** (none)**Supporting Definitions:** (none)

---

**Seq. #:** 7015    **Name:** PCI Operator NPI**Coding Instructions:** Indicate the physician's National Provider Identifier (NPI). NPI's, assigned by the Center for Medicare and Medicaid Services (CMS), are used to uniquely identify physicians for Medicare billing purposes.**Target Value:** The value on current procedure**Selections:** (none)**Supporting Definitions:** (none)

---

## G. PCI Procedure

Seq. #: 7020 Name: PCI Status

**Coding Instructions:** Indicate the status of the PCI. The status is determined at the time the operator decides to perform a PCI.**Target Value:** The highest value on current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	Elective	The procedure can be performed on an outpatient basis or during a subsequent hospitalization without significant risk of infarction or death. For stable inpatients, the procedure is being performed during this hospitalization for convenience and ease of scheduling and NOT because the patient's clinical situation demands the procedure prior to discharge. If the diagnostic catheterization was elective and there were no complications, the PCI would also be elective.
	Urgent	The procedure should be performed on an inpatient basis and prior to discharge because of significant concerns that there is risk of ischemia, infarction and/or death. Patients who are outpatients or in the emergency department at the time that the cardiac catheterization is requested would warrant an admission based on their clinical presentation.
	Emergency	The procedure should be performed as soon as possible because of substantial concerns that ongoing ischemia and/or infarction could lead to death. "As soon as possible" refers to a patient who is of sufficient acuity that you would cancel a scheduled case to perform this procedure immediately in the next available room during business hours, or you would activate the on-call team were this to occur during off-hours.
	Salvage	The procedure is a last resort. The patient is in cardiogenic shock when the PCI begins (i.e. at the time of introduction into a coronary artery or bypass graft of the first guidewire or intracoronary device for the purpose of mechanical revascularization). Within the last ten minutes prior to the start of the case or during the diagnostic portion of the case, the patient has also received chest compressions for a total of at least sixty seconds or has been on unanticipated extracorporeal circulatory support (e.g. extracorporeal mechanical oxygenation, or cardiopulmonary support).

**Supporting Definitions:** (none)

Seq. #: 7025 Name: Pre-PCI Left Ventricular Ejection Fraction

**Coding Instructions:** Code the best estimate of current left ventricular ejection fraction.**Note(s):**

If only a range is reported, report the median of the range (i.e. 50-55%, is reported as 53%).

If only a descriptive value is reported (i.e. normal), enter the corresponding percentage value from the list below:

Normal = 60%

Good function = 50%

Mildly reduced = 45%

Fair function = 40%

Moderately reduced = 30%

Poor function = 25%

Severely reduced = 20%

The Left Ventricular Ejection Fraction can be assessed via invasive (i.e. LV gram) or non-invasive (i.e. Echo, MR, CT or Nuclear) testing.

If an ejection fraction is not measured during this admission and prior to the PCI, and their clinical status has not changed, it is acceptable to code an ejection fraction that was obtained prior to arrival.

**Target Value:** The last value between 6 months prior to current procedure and prior to the intervention**Selections:** (none)**Supporting Definitions:** LVEF:

The left ventricular ejection fraction is the percentage of the blood emptied from the left ventricle at the end of the contraction.

Source: ACC Clinical Data Standards, The Society of Thoracic Surgeons

## G. PCI Procedure

**Seq. #:** 7026    **Name:** Pre-PCI Left Ventricular Ejection Fraction Not Assessed**Coding Instructions:** Indicate whether the left ventricular ejection fraction was not assessed.**Target Value:** The last value between 6 months prior to current procedure and prior to the intervention

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions:** (none)**Seq. #:** 7030    **Name:** Cardiogenic Shock at Start of PCI**Coding Instructions:** Indicate if the patient is in cardiogenic shock at the start of the PCI procedure.**Note(s):**

Transient episodes of hypotension reversed with IV fluid or atropine do not constitute cardiogenic shock. The hemodynamic compromise (with or without extraordinary supportive therapy) must persist for at least 30 minutes.

**Target Value:** Any occurrence on current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions: Cardiogenic Shock:**

Cardiogenic shock is defined as a sustained (>30 minutes) episode of systolic blood pressure <90 mm Hg, and/or cardiac index <2.2 L/min/m<sup>2</sup> determined to be secondary to cardiac dysfunction, and/or the requirement for parenteral inotropic or vasopressor agents or mechanical support (e.g., IABP, extracorporeal circulation, ventricular assist devices) to maintain blood pressure and cardiac index above those specified levels.

Source: Acute Coronary Syndromes Data Standards (JACC 2001 38: 2114 - 30)



## G. PCI Procedure

Seq. #: 7035 Name: PCI Indication

**Coding Instructions:** Indicate the reason the PCI is being performed.**Target Value:** Any occurrence on current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	Immediate PCI for STEMI	Immediate PCI for patient with STEMI (or STEMI equivalent).
	PCI for STEMI (Unstable, >12 hrs from Sx onset)	PCI for STEMI (or STEMI equivalent) more than 12 hours from symptom onset with recurrent or persistent symptoms, symptoms of heart failure or ventricular arrhythmia.
	PCI for STEMI (Stable, >12 hrs from Sx onset)	Patient with STEMI (or STEMI equivalent) who is stable, and is more than 12 hours from symptom onset. The patient does not have any symptoms of recurrent or persistent ischemia, symptoms of heart failure, or electrical instability.
	PCI for STEMI (Stable after successful full-dose Thrombolysis)	PCI for STEMI (or STEMI equivalent) who is stable after receiving full-dose thrombolysis.
	Rescue PCI for STEMI (after failed full-dose lytics)	Rescue PCI for STEMI (or STEMI equivalent) after failed full-dose lytics.
	PCI for high risk Non-STEMI or unstable angina	Includes patients with unstable angina or Non-STEMI who have high risk features for short-term risk of death or nonfatal MI. High risk features includes at least one of the following: <ol style="list-style-type: none"> <li>1. History - accelerating tempo of ischemic symptoms in preceding 48 hours.</li> <li>2. Character of pain - prolonged ongoing (greater than 20 minutes) rest pain.</li> <li>3. Clinical findings: <ol style="list-style-type: none"> <li>A. Pulmonary edema, most likely due to ischemia</li> <li>B. New or worsening mitral regurgitation murmur</li> <li>C. S3 or new worsening rales</li> <li>D. Hypotension, bradycardia, tachycardia</li> <li>E. Age greater than 75 years</li> </ol> </li> <li>4. ECG <ol style="list-style-type: none"> <li>A. Angina at rest with transient ST-segment changes greater than 0.5 mm</li> <li>B. Bundle-branch block, new or presumed new</li> <li>C. Sustained ventricular tachycardia</li> </ol> </li> <li>5. Cardiac markers - NSTEMI patients with elevated cardiac TnT, TnI, or CK-MB.</li> </ol>
	Staged PCI	The second PCI of a planned, staged procedure (the first PCI could have been during a prior admission, or during this admission).
	Other	Includes patients that don't fit into any of the above categories. This can include patients with elective or urgent status, status/post cardiac arrest or cardiogenic shock but without ECG or biomarker evidence of acute infarction.

**Supporting Definitions:** (none)

Seq. #: 7040 Name: STEMI or STEMI Equivalent First Noted

**Coding Instructions:** Indicate if a STEMI or STEMI equivalent was noted on either the first ECG or a subsequent ECG.**Note(s):**

Code "Subsequent ECG" if the ECG on arrival does not indicate STEMI or STEMI equivalent.

**Target Value:** The first value between 1 day prior to current procedure and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	First ECG	
	Subsequent ECG	

**Supporting Definitions:** (none)

## G. PCI Procedure

**Seq. #: 7045 Name:** Subsequent ECG with STEMI or STEMI Equivalent Date

**Coding Instructions:** If patient is undergoing immediate PCI for STEMI or equivalent and ST elevation occurred on an ECG subsequent to the first ECG performed upon arrival, indicate the date the subsequent ECG was performed.

**Target Value:** The first value between 1 day prior to current procedure and current procedure

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 7046 Name:** Subsequent ECG with STEMI or STEMI Equivalent Time

**Coding Instructions:** If patient is undergoing immediate PCI for STEMI or equivalent and ST elevation occurred on an ECG subsequent to the first ECG performed upon arrival, indicate the time the subsequent ECG was performed.

Please note that a time other than arrival time can only be used for patients whose initial ECG does not show ST elevation.

**Note(s):**

Indicate the time (hours:minutes) using the military 24-hour clock, beginning at midnight (0000 hours)

**Target Value:** The first value on Subsequent ECG with STEMI or STEMI Equivalent Date

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 7050 Name:** First Device Activation Date

**Coding Instructions:** Indicate the date the first device was activated regardless of type of device used.

**Target Value:** The first value on current procedure

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 7051 Name:** First Device Activation Time

**Coding Instructions:** Indicate the time the first device was activated regardless of type of device used.

**Note(s):**

Use the earliest time from the following:

1. Time of the first balloon inflation.
2. Time of the first stent deployment.
3. Time of the first treatment of lesion (AngioJet or other thrombectomy/aspiration device, laser, rotational atherectomy).
4. If the lesion cannot be crossed with a guidewire or device (and thus none of the above apply), use the time of guidewire introduction.

This is a process measure about the timeliness of treatment. It is NOT a clinical outcomes measure based on TIMI flow or clinical reperfusion. It does not matter whether the baseline angiogram showed TIMI 3 flow or if the final post-PCI angiogram showed TIMI 0 flow. What is being measured is the time of the first mechanical treatment of the culprit lesion, not the time when TIMI 3 flow was (or was not) restored.

Indicate the time (hours:minutes) using the military 24-hour clock, beginning at midnight (0000 hours).

**Target Value:** The first value on First Device Activation Date

**Selections:** (none)

**Supporting Definitions:** (none)

## G. PCI Procedure

**Seq. #:** 7055 **Name:** Patient Transferred in for Immediate PCI for STEMI**Coding Instructions:** Indicate if the patient was transferred from another facility to have immediate PCI for STEMI at this facility.**Target Value:** Any occurrence between date of symptom onset and current procedure**Selections:**

No

Yes

**Supporting Definitions:** (none)**Seq. #:** 7060 **Name:** Emergency Department Presentation at Referring Facility Date**Coding Instructions:** Code the date of arrival to the original, transferring facility as documented in the medical record.**Note(s):**

If the initial onset of ST elevation MI symptoms or STEMI equivalent occurred after initial ECG and presentation to the transferring facility, it is acceptable to code the date (time) of symptom onset or subsequent ECG to the original, transferring facility, as documented in the medical record.

**Target Value:** The first value between date of symptom onset and current procedure**Selections:** (none)**Supporting Definitions:** (none)**Seq. #:** 7061 **Name:** Emergency Department Presentation at Referring Facility Time**Coding Instructions:** Code the time of arrival to the original, transferring facility as documented in the medical record.**Note(s):**

If the initial onset of ST elevation MI symptoms or STEMI equivalent occurred after initial ECG and presentation to the transferring facility, it is acceptable to code the time of symptom onset or subsequent ECG to the original, transferring facility, as documented in the medical record.

Indicate the time (hours:minutes) using the military 24-hour clock, beginning at midnight (0000 hours)

**Target Value:** The first value on Emergency Department Presentation at Referring Facility Date**Selections:** (none)**Supporting Definitions:** (none)**Seq. #:** 7065 **Name:** Non-system Reason for Delay in PCI**Coding Instructions:** Indicate if there is documentation of a non-system reason for a delay in performing the percutaneous coronary intervention (PCI). Documentation must be from a physician/advanced practice nurse/physician assistant (physician/APN/PA).**Note(s):**

The effect on timing/delay of PCI must be documented in order to be an acceptable reason for delay. If unable to determine whether a documented reason is system in nature, or if physician/APN/PA documentation does not establish a linkage between event(s)/condition(s) and the timing/delay in PCI/reperfusion/cath/transfer to cath lab, select "None."

System reasons for delay are NOT acceptable.

**Target Value:** The first value between arrival at this facility and current procedure**Selections:**

Difficult vascular access

cardiac arrest and/or need for intubation before PCI.

Patient delays in providing consent for the procedure.

Difficulty crossing the culprit lesion during the PCI.

Other

None

**Supporting Definitions:** (none)

## G. PCI Procedure

**Seq. #:** 7245    **Name:** Significant Dissection**Coding Instructions:** Indicate if a significant dissection was observed.**Note(s):**

Typically, dissections described as type A or B are not considered significant dissections because there is no impairment of flow.

Significant dissections are grade C dissections in the presence of ischemia, or grade D-F dissections, all of which are further described as:

type C: persisting contrast medium extravasations;  
type D: spiral filling defect with delayed but complete distal flow;  
type E: persistent filling defect with delayed antegrade flow;  
type F: filling defect with impaired flow and total occlusion

**Target Value:** Any occurrence on current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions: Dissection:**

Dissection is defined as the appearance of contrast materials outside of the expected luminal dimensions of the target vessel and extending longitudinally beyond the length of the lesion.

Source: NCDR

**Seq. #:** 7250    **Name:** Perforation**Coding Instructions:** Indicate if angiographic or clinical evidence of perforation was observed.**Note(s):**

This does not include pre-existing AV fistula and other coronary anomalies.

**Target Value:** Any occurrence on current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions: Perforation:**

A coronary artery perforation occurs when there is angiographic or clinical evidence of a dissection or intimal tear that extends through the full thickness of the arterial wall.

Source: NCDR

## H. Lesion and Devices

**Seq. #:** 7100    **Name:** Lesion Counter**Coding Instructions:** The lesion counter is used to distinguish between multiple lesions on which a PCI is attempted or performed.

When specifying intracoronary devices, list all treated lesions in which the device was utilized.

**Note(s):**

The software-assigned lesion counter should start at one and be incremented by one for each lesion. The lesion counter is reset back to one for each new PCI lab visit.

At least one lesion must be specified for each PCI procedure.

**Target Value:** N/A**Selections:** (none)**Supporting Definitions: Lesion:**

A target lesion is defined as a stenosis within a coronary artery or coronary artery bypass graft on which mechanical coronary revascularization is attempted during the current procedure.

Source: NCDR

## H. Lesion and Devices

Seq. #: 7105    Name: Segment Number

**Coding Instructions:** Indicate the segment(s) that the current lesion spans (a lesion can span one or more segments).

Use the following numeric reference points to identify segments where procedures were attempted and its proximal reference number.

- 1 Proximal right coronary artery conduit segment - pRCA
- 2 Mid-right coronary artery conduit segment - mRCA
- 3 Distal right coronary artery conduit segment - dRCA
- 4 Right posterior descending artery segment - rPDA
- 5 Right posterior atrioventricular segment - rPAV
- 6 First right posterolateral segment - 1st RPL
- 7 Second right posterolateral segment - 2nd RPL
- 8 Third right posterolateral segment - 3rd RPL
- 9 Posterior descending septal perforators segment - pDSP
- 10 Acute marginal segment(s) - aMarg
- 11 Left main coronary artery segment - LM
- 12 Proximal LAD artery segment - pLAD
- 13 Mid-LAD artery segment - mLAD
- 14 Distal LAD artery segment - dLAD
- 15 First diagonal branch segment - 1st Diag
- 15a Lateral first diagonal branch segment - Lat 1st Diag
- 16 Second diagonal branch segment - 2nd Diag
- 16a Lateral second diagonal branch segment - Lat 2nd Diag
- 17 LAD septal perforator segments - LAD SP
- 18 Proximal circumflex artery segment - pCIRC
- 19 Mid-circumflex artery segment - mCIRC
- 19a Distal circumflex artery segment - dCIRC
- 20 First obtuse marginal branch segment - 1st OM
- 20a Lateral first obtuse marginal branch segment - Lat 1st OM
- 21 Second obtuse marginal branch segment - 2nd OM
- 21a Lateral second obtuse marginal branch segment - Lat 2nd OM
- 22 Third obtuse marginal branch segment - 3rd OM
- 22a Lateral third obtuse marginal branch segment - Lat 3rd OM
- 23 Circumflex artery AV groove continuation segment - CIRC AV
- 24 First left posterolateral branch segment - 1st LPL
- 25 Second left posterolateral branch segment - 2nd LPL
- 26 Third posterolateral descending artery segment - 3rd LPL
- 27 Left posterolateral descending artery segment - LPDA
- 28 Ramus intermedius segment - Ramus
- 28a Lateral ramus intermedius segment - Lat Ramus
- 29 Third diagonal branch segment - 3rd Diag
- 29a Lateral third diagonal branch segment - Lat 3rd Diag

**Note(s):**

A segment is a defined region of a coronary artery, as illustrated in the CathPCI Registry coronary anatomy segment diagram.

If the target lesion is in a bypass graft, indicate the segment location of the first anastomosis distal to the lesion (and if it's above a Y graft, indicate the segment location of the most important distal vessel).

If a PCI of a left subclavian supplying a LIMA is performed, it is not considered a PCI.

**Target Value:** N/A**Selections:** (none)**Supporting Definitions: Lesion:**

A target lesion is defined as a stenosis within a coronary artery or coronary artery bypass graft on which mechanical coronary revascularization is attempted.

Source: NCDR

## H. Lesion and Devices

**Seq. #: 7110 Name: Culprit Lesion**

**Coding Instructions:** Indicate the lesion that is considered to be responsible for the acute coronary syndrome.

**Note(s):**

"No" should be coded if there is no apparent lesion that could be responsible for evidence of ischemia.

"Unknown" should be coded if the culprit segment was not known.

The physician should use his/her judgment in choosing the primary lesion. In cases in which this is difficult to determine (despite correlation of ECG changes and angiographic data), the lesion supplying the largest territory of myocardium should be selected.

**Target Value:** Any occurrence on current procedure

**Selections:**

Selection Text	Definition
----------------	------------

No

Yes

Unknown

**Supporting Definitions:** (none)

**Seq. #: 7115 Name: Stenosis Immediately Prior to Rx**

**Coding Instructions:** Indicate the percent diameter stenosis immediately prior to the treatment of this lesion.

**Target Value:** The highest value on current procedure

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 7120 Name: Chronic Total Occlusion**

**Coding Instructions:** Indicate if the segment with 100% pre-procedure stenosis was presumed to be 100% occluded for at least 3 months previous to this procedure AND not related to a clinical event prompting (or leading to) this procedure.

**Target Value:** Any occurrence on current procedure

**Selections:**

Selection Text	Definition
----------------	------------

No

Yes

**Supporting Definitions:** (none)

**Seq. #: 7125 Name: IVUS**

**Coding Instructions:** Indicate if intravascular ultrasound was performed to confirm the percent stenosis.

**Target Value:** Any occurrence between beginning of procedure and prior to intervention

**Selections:**

Selection Text	Definition
----------------	------------

No

Yes

**Supporting Definitions:** (none)

**Seq. #: 7130 Name: Fractional Flow Reserve**

**Coding Instructions:** Indicate if fractional flow reserve was performed to confirm the percent stenosis. Myocardial fractional flow reserve is a lesion-specific index of stenosis severity.

**Target Value:** Any occurrence between beginning of procedure and prior to intervention

**Selections:**

Selection Text	Definition
----------------	------------

No

Yes

**Supporting Definitions:** (none)

## H. Lesion and Devices

**Seq. #: 7135 Name:** Fractional Flow Reserve Ratio**Coding Instructions:** Indicate the fractional flow reserve ratio.**Target Value:** The lowest value between beginning of procedure and prior to intervention**Selections:** (none)**Supporting Definitions:** (none)**Seq. #: 7140 Name:** Pre-Procedure TIMI Flow**Coding Instructions:** Indicate the pre-procedure TIMI flow value.**Note(s):**

If a lesion spans multiple segments with different TIMI flows, coded the lowest TIMI flow within the entire lesion.

**Target Value:** Any occurrence on current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	TIMI - 0	No flow/no perfusion
	TIMI - 1	Slow penetration without perfusion
	TIMI - 2	Partial flow/partial perfusion (greater than TIMI-1 but less than TIMI-3.
	TIMI - 3	Complete and brisk flow/complete perfusion.

**Supporting Definitions:** (none)**Seq. #: 7145 Name:** Previously Treated Lesion**Coding Instructions:** Indicate if the lesion has been treated before in the current or a prior episode of care.**Target Value:** Any occurrence between birth and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions:** (none)**Seq. #: 7150 Name:** Previously Treated Lesion Timeframe**Coding Instructions:** If this lesion was previously treated during another PCI procedure, then indicate the timeframe in calendar months or years.**Target Value:** Any occurrence between birth and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	< 1 month	
	1-5 months	
	6-12 months	
	1-2 years	
	>2 years	
	Time unknown	

**Supporting Definitions:** (none)**Seq. #: 7155 Name:** Treated with Stent**Coding Instructions:** Indicate if the previously treated lesion was treated with any type of stent in the current or prior episode of care.**Target Value:** Any occurrence between birth and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions:** (none)



## H. Lesion and Devices

**Seq. #: 7160 Name:** In-stent Restenosis

**Coding Instructions:** Indicate if the previously treated and stented lesion is being treated for in-stent restenosis. In-stent restenosis is defined as a previously stented lesion that has 50% or greater stenosis

**Target Value:** Any occurrence between birth and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
--------------------	-----------------------	-------------------

	No	
--	----	--

	Yes	
--	-----	--

**Supporting Definitions:** (none)

**Seq. #: 7165 Name:** In-stent Thrombosis

**Coding Instructions:** Indicate if the previously treated and stented lesion is being treated because of the presence of a thrombus in the stent.

**Target Value:** Any occurrence between birth and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
--------------------	-----------------------	-------------------

	No	
--	----	--

	Yes	
--	-----	--

**Supporting Definitions:** (none)

**Seq. #: 7170 Name:** Stent Type

**Coding Instructions:** Indicate the type of stent in the previously treated lesion.

**Note(s):**

If a patient has two types of stents in the lesion (drug eluting and non-drug eluting), code "Drug eluting stent".

**Target Value:** Any occurrence between birth and current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
--------------------	-----------------------	-------------------

	Drug eluting stent	
--	--------------------	--

	Non drug eluting stent	
--	------------------------	--

	Stent type unknown	
--	--------------------	--

The patient has a stent but it is not known whether it was drug eluting or non drug eluting.

**Supporting Definitions:** (none)

**Seq. #: 7175 Name:** Lesion In Graft

**Coding Instructions:** If the treated lesion is in a coronary arter bypass graft, indicate the type of graft.

**Target Value:** Any occurrence on current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
--------------------	-----------------------	-------------------

	Not in graft	
--	--------------	--

Lesion is not in a coronary artery bypass graft.

	Vein	
--	------	--

Lesion is in a vein graft.

	LIMA graft	
--	------------	--

Lesion is in a left internal mammary artery graft.

	Other artery	
--	--------------	--

Lesion is in an "other" arterial graft (not including LIMA grafts). Radial artery grafts or other free arterial conduit grafts (e.g. free IMA) should be coded as an other arterial graft.

**Supporting Definitions:** (none)

## H. Lesion and Devices

**Seq. #: 7180 Name:** Location in Graft**Coding Instructions:** If the lesion is in a graft, indicate the location of the most severe stenosis in the graft.**Target Value:** Any occurrence on current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	Aortic	The most severe stenosis is at the aortic anastomosis of the graft ( $\leq 3$ mm from insertion point).
	Body	The most severe stenosis is in the body of the graft.
	Distal	The most severe stenosis is at the distal anastomosis of the graft ( $\leq 3$ mm from insertion point).

**Supporting Definitions:** (none)**Seq. #: 7185 Name:** Lesion Complexity**Coding Instructions:** Indicate the complexity of the lesion as defined in the selections below.**Target Value:** Any occurrence on current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	Non-High/Non-C Lesion	<p>Non-high/non-C lesions are considered Type A or B lesions. They can be characterized as follows:</p> <p>Low Risk or Type A lesions:  Descrete (<math>&lt;10</math> mm length)  Concentric  Readily accessible  Non-angulated segment <math>&lt;45</math> degrees  Smooth contour  Little or no calcification  Less than totally occlusive  Not ostial in location  No major branch involvement  Absence of thrombus</p> <p>Medium Risk (Type B1) lesions:  Tubular (10-20 mm length)  Eccentric  Moderate tortuosity of proximal segment  Moderately angulated segment, 45-90 degrees  Irregular contour  Moderate to heavy calcification  Ostial in location  Bifurcation lesions requiring double guidewires  Some thrombus present  Total occlusion <math>&lt;3</math> months old</p>
	High/C Lesion	<p>Medium Risk (Type B2 lesions): Two or more "B" characteristics.</p> <p>Descriptions of a High Lesion Risk (C Lesion):  Diffuse (length <math>&gt; 2</math>cm)  Excessive tortuosity of proximal segment  Extremely angulated segments <math>&gt; 90</math> degrees  Total occlusions <math>&gt; 3</math> months old and/or bridging collaterals  Inability to protect major side branches  Degenerated vein grafts with friable lesions</p>

**Supporting Definitions:** (none)

## H. Lesion and Devices

**Seq. #: 7190 Name:** Lesion Length**Coding Instructions:** Indicate the length of the treated lesion in millimeters.**Note(s):**

Information obtained after the baseline angiogram can be used to help determine lesion length (e.g. for total occlusions where the distal vessel can not be visualized).

**Target Value:** Any occurrence on current procedure**Selections:** (none)**Supporting Definitions:** (none)**Seq. #: 7195 Name:** Thrombus Present**Coding Instructions:** Indicate if there was a thrombus present.**Note(s):**

Thrombus is suggested by certain angiographic features: haziness, reduced contrast density or contrast persistence, irregular lesion contours, or globular filling defects.

**Target Value:** Any occurrence on current procedure**Selections:**

No

Yes

**Supporting Definitions:** (none)**Seq. #: 7200 Name:** Bifurcation Lesion**Coding Instructions:** Indicate if the lesion is at a significant bifurcation, trifurcation or more complex branch point.**Note(s):**

A significant bifurcation or branch point is a division of a vessel into at least two branches, each of which is &gt;1.5 mm or greater in diameter. In a bifurcation or branch lesion, the plaque extends from at least one of the limbs to the branch point; it need not progress down all the proximal and distal branches. Bifurcations or branch point lesions should be considered one lesion, no matter how many limbs are treated.

**Target Value:** Any occurrence on current procedure**Selections:**

No

Yes

**Supporting Definitions:** (none)**Seq. #: 7205 Name:** Guidewire Across Lesion**Coding Instructions:** Indicate if a guidewire successfully crossed the lesion.**Target Value:** Any occurrence on current procedure**Selections:**

No

Yes

**Supporting Definitions:** (none)**Seq. #: 7210 Name:** Stenosis Post-Procedure**Coding Instructions:** Indicate the post-procedure percent stenosis for the treated lesion.**Target Value:** The highest value on current procedure**Selections:** (none)**Supporting Definitions:** (none)

## H. Lesion and Devices

**Seq. #: 7215 Name:** Post-Procedure TIMI Flow**Coding Instructions:** Indicate the post-procedure TIMI flow.**Note(s):**

If a lesion spans multiple segments with different TIMI flows, coded the lowest TIMI flow within the entire lesion.

**Target Value:** Any occurrence on current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	TIMI - 0	No flow/no perfusion
	TIMI - 1	Slow penetration without perfusion
	TIMI - 2	Partial flow/partial perfusion (greater than TIMI-1 but less than TIMI-3.
	TIMI - 3	Complete and brisk flow/complete perfusion.

**Supporting Definitions:** (none)**Seq. #: 7220 Name:** Device Deployed**Coding Instructions:** Indicate if a device was deployed during the procedure.**Note(s):**

If Device Deployed (7220) is 'Yes' for any lesion, at least one intracoronary device must be specified.

**Target Value:** Any occurrence on current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions:** (none)**Seq. #: 7225 Name:** Intracoronary Device(s) Used**Coding Instructions:** Indicate all devices utilized during the current procedure. If a device was utilized on multiple lesions, specify it only once (e.g., if a balloon was used to dilate two separate lesions, list it only once). Every treatment and support device utilized during the procedure should be specified.**Note(s):**

Each intracoronary device must be associated with at least one lesion via the Lesion Counter (7100) if Device Deployed (7220) is 'Yes'. An intracoronary device may be associated with more than one lesion.

The devices available for selection in your application are controlled by the intracoronary device downloadable file. This file and its updates will be maintained by the ACC and will be made available on the Internet for downloading and importing into your application.

**Target Value:** Any occurrence on current procedure**Selections:** (none)**Supporting Definitions:** (none)**Seq. #: 7230 Name:** Intracoronary Device Counter**Coding Instructions:** The software-assigned intracoronary device counter should start at one and be incremented by one for each intracoronary device used.**Note(s):**

The intracoronary device counter numbers should be assigned sequentially in ascending order. Do not skip numbers.

The intracoronary device counter is reset back to one for each procedure.

**Target Value:** N/A**Selections:** (none)**Supporting Definitions:** (none)

## H. Lesion and Devices

**Seq. #: 7235    Name: Device Diameter****Coding Instructions:** Indicate the diameter of the intracoronary device in millimeters.**Target Value:** N/A**Selections:** (none)**Supporting Definitions:** (none)**Seq. #: 7240    Name: Device Length****Coding Instructions:** Indicate the length of the device in millimeters.**Target Value:** N/A**Selections:** (none)**Supporting Definitions:** (none)**Seq. #: 7255    Name: Auxiliary 5****Coding Instructions:** Reserved for future use.**Target Value:** N/A**Selections:** (none)**Supporting Definitions:** (none)**Seq. #: 7260    Name: Auxiliary 6****Coding Instructions:** Reserved for future use.**Target Value:** N/A**Selections:** (none)**Supporting Definitions:** (none)

## Z. Administration

**Seq. #: 1000 Name:** Participant ID

**Coding Instructions:** Indicate the participant ID of the submitting facility.

**Target Value:** N/A

**Selections:** (none)

**Supporting Definitions:** **Participant ID:**

Participant ID is a unique number assigned to each database participant by NCDR. A database participant is defined as one entity that signs a Participation Agreement with the NCDR, submits one data submission file to the harvest, and receives one report on their data.

Each participant's data if submitted to harvest must be in one data submission file for a quarter. If one participant keeps their data in more than one file (e.g. at two sites), then the data must be combined into a single data submission to the system to file for the harvest. If two or more participants share a single purchased software, and enter cases into one database, then the data must be exported into different data submission files, one for each participant ID.

Source: NCDR

**Seq. #: 1010 Name:** Participant Name

**Coding Instructions:** Indicate the full name of the facility.

**Note(s):**

Values should be full, official hospital names with no abbreviations or variations in spelling.

**Target Value:** N/A

**Selections:** (none)

**Supporting Definitions:** **Participant Name:**

Indicate the full name of the facility where the procedure was performed. Values should be full, official hospital names with no abbreviations or variations in spelling.

Source: NCDR

**Seq. #: 1016 Name:** Participant NPI

**Coding Instructions:** Indicate the participant's National Provider Identifier (NPI).

**Target Value:** N/A

**Selections:** (none)

**Supporting Definitions:** **National Provider Identifier:**

This number, assigned by the Centers for Medicare and Medicaid Services (CMS), is used to uniquely identify facilities for Medicare billing purposes.

Source: NCDR

**Seq. #: 1020 Name:** Time Frame of Data Submission

**Coding Instructions:** Indicate the time frame of data included in the data submission. Format: YYYYQQ. e.g., 2006Q4

**Target Value:** N/A

**Selections:** (none)

**Supporting Definitions:** (none)

## Z. Administration

**Seq. #: 1040 Name: Transmission Number**

**Coding Instructions:** This is a unique number created, and automatically inserted by the software into extract file. It identifies the number of times the software has created data submission files. The transmission number should be incremented by one every time the data submission files are exported. The transmission number should never be repeated.

**Target Value:** N/A

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 1050 Name: Vendor Identifier**

**Coding Instructions:** Vendor identification (agreed upon by mutual selection between the vendor and the NCDR) to identify software vendor. This is entered into the schema automatically by vendor software. Vendors must use consistent name identification across sites. Changes to vendor name identification must be approved by the NCDR.

**Target Value:** N/A

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 1060 Name: Vendor Software Version**

**Coding Instructions:** Vendor's software product name and version number identifying the software which created this record (assigned by vendor). Vendor controls the value in this field. This is entered into the schema automatically by vendor software. Version passing certification/harvest testing will be noted at the NCDR.

**Target Value:** N/A

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 1070 Name: Registry Identifier**

**Coding Instructions:** The NCDR registry identifier describes the data registry to which these records apply. It is implemented in the software at the time the data is collected and records are created. This is entered into the schema automatically by software.

**Target Value:** N/A

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 1080 Name: Registry Version**

**Coding Instructions:** Registry version describes the version number of the Data Specifications/Dictionary, to which each record conforms. It identifies which fields should have data, and what are the valid data for each field. It is the version implemented in the software at the time the data is collected and the records are created. This is entered into the schema automatically by software.

**Target Value:** N/A

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 1200 Name: Auxiliary 0**

**Coding Instructions:** Reserved for future use

**Target Value:** N/A

**Selections:** (none)

**Supporting Definitions:** (none)

## I. Labs

**Seq. #: 7300 Name:** CK-MB Pre-Procedure

**Coding Instructions:** Indicate the pre-procedure CK-MB baseline that was drawn at your facility. Exclude point-of-care (bedside) testing. (ng/mL)

**Target Value:** The last value between date of arrival and current procedure

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 7301 Name:** CK Pre-Procedure Not Applicable

**Coding Instructions:** Indicate if the pre-procedure CK baseline was not drawn, or not drawn at your facility, or drawn at your facility using point-of-care (bedside) testing.

**Target Value:** N/A

Selections:	Selection Text	Definition
	No	Code "no" when the pre-procedure CK baseline was drawn at the facility.
	Yes	Code "yes" when the pre-procedure CK was not drawn, not drawn at your facility, or drawn at your facility using point-of-care (bedside) testing.

**Supporting Definitions:** (none)

**Seq. #: 7302 Name:** CK Pre-Procedure Drawn and Normal

**Coding Instructions:** Indicate if the pre-procedure CK Level was drawn and was normal, thus the CK-MB was not measured at your facility.

**Target Value:** N/A

Selections:	Selection Text	Definition
	No	
	Yes	Code "yes" when pre-procedure CK level was drawn and normal.

**Supporting Definitions:** (none)

**Seq. #: 7305 Name:** Troponin I Pre-Procedure

**Coding Instructions:** Indicate the pre-procedure Troponin I baseline, in ng/mL, if drawn at your facility. Exclude point-of-care (bedside) testing.

**Note(s):**

Exclude values drawn at other facilities (they have different upper reference limits).

**Target Value:** The last value between date of arrival and current procedure

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 7306 Name:** Troponin I Pre-Procedure Not Drawn

**Coding Instructions:** Indicate if the pre-procedure Troponin I baseline was not drawn, not drawn at your facility, or drawn at your facility using point-of-care (bedside) testing.

**Target Value:** N/A

Selections:	Selection Text	Definition
	No	
	Yes	Code "yes" if the pre-procedure Troponin I baseline was not drawn or drawn at your facility using point-of-care (bedside) testing.

**Supporting Definitions:** (none)



## I. Labs

**Seq. #: 7310 Name:** Troponin T Pre-Procedure

**Coding Instructions:** Indicate the pre-procedure Troponin T baseline, in ng/mL, if drawn at your facility. Exclude point-of-care (bedside) testing.

**Note(s):**

Exclude values drawn at other facilities (they have different upper reference limits).

**Target Value:** The last value between date of arrival and current procedure

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 7311 Name:** Troponin T Pre-Procedure Not Drawn

**Coding Instructions:** Indicate if the pre-procedure Troponin T baseline was not drawn, not drawn at your facility, or drawn at your facility using point-of-care (bedside) testing.

**Target Value:** N/A

Selections:	Selection Text	Definition
	No	
	Yes	Code "yes" when the pre-procedure Troponin T baseline was not drawn or drawn at your facility using point-of-care (bedside) testing.

**Supporting Definitions:** (none)

**Seq. #: 7315 Name:** Pre-Procedure Creatinine

**Coding Instructions:** Indicate the patient's most recent creatinine level in mg/dL.

**Target Value:** The last value between 1 month prior to arrival and current procedure

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 7316 Name:** Pre-Procedure Creatinine Not Drawn

**Coding Instructions:** Indicate if the patient's creatinine level was not collected.

**Target Value:** N/A

Selections:	Selection Text	Definition
	No	
	Yes	Code "yes" when pre-procedure Creatine level was not collected.

**Supporting Definitions:** (none)

**Seq. #: 7320 Name:** Pre-Procedure Hemoglobin

**Coding Instructions:** Indicate the most recent hemoglobin level in g/dL.

**Target Value:** The last value between 1 month prior to arrival and current procedure

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 7321 Name:** Pre-Procedure Hemoglobin Not Drawn

**Coding Instructions:** Indicate if a pre-procedure hemoglobin level was not collected.

**Target Value:** N/A

Selections:	Selection Text	Definition
	No	
	Yes	Code "yes" when pre-procedure Hemoglobin is not drawn.

**Supporting Definitions:** (none)

## I. Labs

**Seq. #: 7325 Name: CK-MB Post-Procedure**

**Coding Instructions:** Indicate the post-procedure CK-MB peak value within the interval of 6-24 hours post-PCI. If more than one value is available, code the peak value. (ng/mL)

**Note(s):**

If multiple biomarker samples are obtained in the 6-24 hour interval, then report the highest value obtained. Values obtained less than 6 hours following the conclusion of the PCI, and normal values obtained >24 hours after the conclusion of the PCI, should be coded as "CK-MB Post Procedure Not Drawn."

**Target Value:** The highest value between 6 hours after current procedure and 24 hours after current procedure

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 7326 Name: CK Post-Procedure Not Applicable**

**Coding Instructions:** Indicate if the post-procedure CK peak value was not drawn, or drawn using point-of-care (bedside) testing, or drawn outside of the 6-24 hour timeframe.

**Note(s):**

Values obtained less than 6 hours following the conclusion of the PCI, and normal values obtained >24 hours after the conclusion of the PCI, should be coded as "CK-MB Post Procedure Not Applicable - Yes."

**Target Value:** N/A

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	Code "no" when the post-procedure CK baseline was drawn at the facility.
	Yes	Code "yes" when the post-procedure CK was not drawn, not drawn at your facility, or drawn at your facility using point-of-care (bedside) testing.

**Supporting Definitions:** (none)

**Seq. #: 7327 Name: CK Post-Procedure Drawn and Normal**

**Coding Instructions:** Indicate if the post-procedure CK level was drawn and was normal, thus the CK-MB was not measured.

**Target Value:** N/A

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	Code "yes" when the post-procedure CK level was drawn and normal.

**Supporting Definitions:** (none)

**Seq. #: 7330 Name: Troponin I Post-Procedure**

**Coding Instructions:** Indicate the post-procedure Troponin I peak value, in ng/mL, within the interval of 6-24 hours post-PCI. If more than one value is available, code the peak value.

**Note(s):**

At least one determination of biomarkers obtained within the interval of 6-24 hours post-PCI is preferred. If multiple biomarker samples are obtained in the 6-24 hour interval, then report the highest value obtained. Values obtained less than 6 hours following the conclusion of the PCI, and normal values obtained >24 hours after the conclusion of the PCI, are not acceptable.

**Target Value:** The highest value between 6 hours after current procedure and 24 hours after current procedure

**Selections:** (none)

**Supporting Definitions:** (none)

## I. Labs

**Seq. #: 7331 Name:** Troponin I Post-Procedure Not Drawn

**Coding Instructions:** Indicate if the post-procedure Troponin I peak value was not drawn or drawn using point-of-care (bedside) testing.

**Target Value:** N/A

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	Code "yes" when post-procedure Troponin I peak value was not drawn or drawn using point-of-care (bedside) testing.

**Supporting Definitions:** (none)

**Seq. #: 7335 Name:** Troponin T Post-Procedure

**Coding Instructions:** Indicate the post-procedure Troponin T value, in ng/mL. If more than one value is available, code the peak value.

**Note(s):**

At least one determination of biomarkers obtained within the interval of 6-24 hours post-PCI is preferred. If multiple biomarker samples are obtained in the 6-24 hour interval, then report the highest value obtained. Values obtained less than 6 hours following the conclusion of the PCI, and normal values obtained >24 hours after the conclusion of the PCI, are not acceptable.

**Target Value:** The highest value between 6 hours after current procedure and 24 hours after current procedure

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 7336 Name:** Troponin T Post-Procedure Not Drawn

**Coding Instructions:** Indicate if the post-procedure Troponin T peak value was not drawn or drawn using point-of-care (bedside) testing.

**Target Value:** N/A

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	Code "yes" if the post-procedure Troponin Tpeak was not drawn or drawn at your facility using point-of-care (bedside) testing.

**Supporting Definitions:** (none)

**Seq. #: 7340 Name:** Post-Procedure Creatinine

**Coding Instructions:** Indicate the post-procedure creatinine level in mg/dL. If more than one level is available, code the peak level.

**Note(s):**

For patients with extended hospital stays, restrict coding of post-procedure creatinine to 30 days after the last procedure.

**Target Value:** The highest value between current procedure and until next procedure or discharge

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 7341 Name:** Post-Procedure Creatinine Not Drawn

**Coding Instructions:** Indicate if a post-procedure creatinine level was not collected.

**Note(s):**

For patients with extended hospital stays, restrict coding of post-procedure creatinine to 30 days after the last procedure.

**Target Value:** N/A

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	Code "yes" when post-procedure Creatinine level was not collected.

**Supporting Definitions:** (none)

## I. Labs

---

**Seq. #:** 7345    **Name:** Post-Procedure Hemoglobin**Coding Instructions:** Indicate the post-procedure hemoglobin level in g/dL.**Target Value:** The lowest value between current procedure and 72 hours after current procedure**Selections:** (none)**Supporting Definitions:** (none)

---

**Seq. #:** 7346    **Name:** Post-Procedure Hemoglobin Not Drawn**Coding Instructions:** Indicate if a post-procedure hemoglobin level was not collected.**Target Value:** N/A**Selections:**

<i>Selection Text</i>	<i>Definition</i>
No	
Yes	Code "yes" when post-procedure Hemoglobin is not drawn.

**Supporting Definitions:** (none)

---

## J. Intra and Post Procedure Events

Seq. #: 8000 Name: Myocardial Infarction (Biomarker Positive)

**Coding Instructions:** Indicate the NEW occurrence of a biomarker positive myocardial infarction after PCI. At least one determination of biomarkers obtained no sooner than 6 hours after PCI, and preferably within the interval of 6-24 hours post-PCI, should be used to make this diagnosis.

**Note(s):**

Q waves with absent, incomplete or inconclusive biomarkers should be considered evidence of MI and should be coded as yes.

In rare situations, biomarkers may not be obtained in the setting of a post-PCI acute MI (e.g., sudden unexpected cardiac death without symptoms or ECG changes suggestive of ischemia, patient is transferred, or biomarkers were just not ordered). In these situations, the site may choose to report a clinically-diagnosed post-PCI myocardial infarction even in the absence of the usually required biomarker elevations.

For patients with extended hospital stays, restrict coding of post-procedure events to 30 days after the last procedure.

**Target Value:** Any occurrence between start of procedure and until the next procedure or until discharge

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions: Myocardial Infarction:**

1. Myocardial infarction within 24 hours post-PCI:

a. Pts with normal baseline (pre-procedure) cardiac biomarker values:

Elevations of cardiac biomarkers above 3 times the upper limit of normal for your laboratory (i.e., above 3 times the 99th percentile upper reference limit for a "normal" population) are indicative of peri-procedural myocardial infarction. ECG changes or symptoms are not required to qualify.

Note: Some patients presenting with acute coronary syndrome will not have biomarker elevations prior to the PCI. Elevated biomarkers after PCI in these cases indicate the presence of a peri-procedural MI, but do not necessarily mean that the MI was caused by the PCI.

b. Pts with elevated baseline (pre-procedure) cardiac biomarkers have three possible scenarios:

i. Patients with monotonically rising and elevated biomarker levels prior to PCI are assumed to be in the midst of an acute myocardial infarction. In these patients, it is not possible to distinguish necrosis that resulted from the PCI vs. necrosis arising from the presenting acute MI, so code no for myocardial infarction after PCI.

ii. Patients with elevated biomarkers pre-procedure who do NOT have a characteristic rise and fall in biomarker levels are unlikely to be experiencing an acute myocardial infarction prior to the PCI (e.g., "flat" chronic elevations of troponin-T in patients with renal failure, chronic stable elevations of CK in patients with myositis or hypothyroidism). In this scenario, code no for myocardial infarction after PCI.

iii. Patients whose biomarkers exhibited a pre-procedure rise and fall most likely have completed their presenting infarct. In these patients, a post-procedural increase in biomarkers that is greater than three times the upper limit of normal for your laboratory is indicative of a post-PCI reinfarction and should be coded as yes for this event. "Greater than three times the upper limit of normal for your laboratory" means an additional rise in biomarkers that is three times the 99th percentile upper reference limit for a "normal" population. ECG changes or symptoms are not required to qualify.

2. MI > 24 hours post PCI but prior to discharge is evidenced by any of the following:

- a. A rise and fall in cardiac biomarkers (preferably troponin) with at least one of the values in the abnormal range for that laboratory, together with at least one of the developments listed below, is a manifestations of myocardial infarction. The abnormal range for your laboratory means levels above the 99th percentile of the upper reference limit (URL) for normal subjects.
  - i. Ischemic symptoms;
  - ii. ECG changes indicative of new ischemia (new ST-T changes, new left bundle branch block, or loss of R wave voltage);
  - iii. Development of pathological Q waves in 2 or more contiguous leads in the ECG (or equivalent findings for true posterior MI);
  - iv. Imaging evidence of new loss of viable myocardium or new regional wall motion abnormality;
  - v. Documentation in the medical record of the diagnosis of acute myocardial infarction based on the cardiac biomarker pattern in the absence of any items enumerated in 1-4 due to conditions that may mask their appearance (e.g., peri-operative infarct when the patient cannot report ischemic symptoms; baseline left bundle branch block or ventricular pacing)

b. Imaging evidence of a region with new loss of viable myocardium at rest in the absence of a non-ischemic

## J. Intra and Post Procedure Events

cause. This can be manifest as:

- i. Echocardiographic, CT, MR, ventriculographic or nuclear imaging evidence of left ventricular thinning or scarring and failure to contract appropriately (i.e., hypokinesis, akinesis, or dyskinesis)
- ii. Fixed (non-reversible) perfusion defects on nuclear radioisotope imaging (e.g., MIBI, thallium).

3. Peri-CABG MI (within the first 72 hours following CABG):

CABG-related myocardial infarction is defined by an increase of biomarkers greater than 5 times the upper limit of normal for your laboratory (i.e., above 5 times the 99th percentile upper reference limit for a 'normal' population) compared with the pre-CABG biomarker value closest to the time of surgery plus one of the following:

a) new pathological Q waves or new LBBB;

b) angiographically documented new occlusion or thrombosis of a graft or native coronary artery since the pre-operative angiogram;

c) imaging evidence of new loss of viable myocardium at rest in the absence of a non-ischemic cause.

Source: Joint ESC-ACC-AHA-WHF 2007 Task Force consensus statement "Universal Definition of Myocardial Infarction".

---

**Seq. #: 8005    Name: Cardiogenic Shock**

**Coding Instructions:** Indicate if the patient had a new onset or acute recurrence of cardiogenic shock.

**Note(s):**

Transient episodes of hypotension reversed with IV fluid or atropine do not constitute cardiogenic shock. The hemodynamic compromise (with or without extraordinary supportive therapy) must persist for at least 30 minutes.

For patients with extended hospital stays, restrict coding of post-procedure events to 30 days after the last procedure.

**Target Value:** Any occurrence between start of procedure and until next procedure or discharge

**Selections:**

Selection Text	Definition
No	
Yes	

**Supporting Definitions: Cardiogenic Shock:**

Cardiogenic shock is defined as a sustained (>30 minutes) episode of systolic blood pressure <90 mm Hg, and/or cardiac index <2.2 L/min/m<sup>2</sup> determined to be secondary to cardiac dysfunction, and/or the requirement for parenteral inotropic or vasopressor agents or mechanical support (e.g., IABP, extracorporeal circulation, ventricular assist devices) to maintain blood pressure and cardiac index above those specified levels.

Source: ACC Data Standards

---

## J. Intra and Post Procedure Events

**Seq. #: 8010 Name: Heart Failure**

**Coding Instructions:** Indicate if the patient had new onset or acute recurrence of heart failure which necessitated new or increased pharmacologic therapy.

**Note(s):**

For patients with extended hospital stays, restrict coding of post-procedure events to 30 days after the last procedure.

**Target Value:** Any occurrence between start of procedure and until next procedure or discharge

**Selections:**

<i>Selection Text</i>	<i>Definition</i>
-----------------------	-------------------

No

Yes

**Supporting Definitions: Heart Failure:**

A previous hospital admission with a principal diagnosis of heart failure is considered evidence of heart failure history.

Heart failure is defined as physician documentation or report of any of the following clinical symptoms of heart failure: unusual dyspnea on light exertion; recurrent dyspnea occurring in the supine position; fluid retention; the description of rales, jugular venous distension, pulmonary edema on physical exam; or pulmonary edema on chest x-ray. A previous hospital admission with principal diagnosis of heart failure is considered evidence of heart failure history. A low ejection fraction without clinical evidence of heart failure does not qualify as heart failure.

Source: ACC Data Standards, The Society of Thoracic Surgeons

**Seq. #: 8015 Name: CVA/Stroke**

**Coding Instructions:** Indicate if the patient had a cerebrovascular accident (CVA).

**Note(s):**

A stroke or CVA is documented by a loss of neurological function caused by an ischemic or hemorrhagic event with residual symptoms lasting at least 24 hours after onset or leading to death.

For patients with extended hospital stays, restrict coding of post-procedure events to 30 days after the last procedure.

**Target Value:** Any occurrence between start of procedure and until next procedure or discharge

**Selections:**

<i>Selection Text</i>	<i>Definition</i>
-----------------------	-------------------

No

Yes

**Supporting Definitions:** (none)

**Seq. #: 8021 Name: Hemorrhagic Stroke**

**Coding Instructions:** Indicate if the patient experienced a hemorrhagic stroke.

**Target Value:** Any occurrence between start of procedure and until next procedure or discharge

**Selections:**

<i>Selection Text</i>	<i>Definition</i>
-----------------------	-------------------

No

Yes

**Supporting Definitions: Hemorrhagic Stroke:**

A stroke with documentation on imaging (e.g., CT scan or MRI of hemorrhage in the cerebral parenchyma, or a subdural or subarachnoid hemorrhage). Evidence of hemorrhagic stroke obtained from lumbar puncture, neurosurgery, or autopsy can also conform the diagnosis.

Source: Acute Coronary Syndrome Data Standards (JACC 2001 38:2114-30)

## J. Intra and Post Procedure Events

**Seq. #: 8025 Name:** Tamponade**Coding Instructions:** Indicate if the patient experienced fluid in the pericardial space compromising cardiac filling and requiring intervention.**Note(s):**

For patients with extended hospital stays, restrict coding of post-procedure events to 30 days after the last procedure

**Target Value:** Any occurrence between start of procedure and until next procedure or discharge**Selections:***Selection Text**Definition*

No

Yes

**Supporting Definitions: Tamponade:**

Tamponade should be documented by either:

1. Echocardiogram showing pericardial fluid and signs of tamponade such as right heart compromise, or
2. Systemic Hypotension due to pericardial fluid compromising cardiac function.

Source: NCDR

**Seq. #: 8030 Name:** New Requirement for Dialysis**Coding Instructions:** Indicate if the patient experienced acute or worsening renal failure necessitating renal dialysis.**Note(s):**

If a patient is on receiving continuous veno-venous hemofiltration (CVVH) as a result of renal failure (and not as treatment to remove fluid for heart failure), code yes.

For patients with extended hospital stays, restrict coding of post-procedure events to 30 days after the last procedure.

**Target Value:** Any occurrence between start of procedure and until next procedure or discharge**Selections:***Selection Text**Definition*

No

Yes

**Supporting Definitions:** (none)**Seq. #: 8035 Name:** Other Vascular Complications Requiring Treatment**Coding Instructions:** Indicate if the patient experienced any other vascular complications (excluding external bleeding or hematomas) at the percutaneous entry site that required treatment or intervention.**Note(s):**

Code 'yes' for patients treated with IV therapy for loss of distal pulse.

For patients with extended hospital stays, restrict coding of post-procedure events to 30 days after the last procedure.

**Target Value:** Any occurrence between start of procedure and until next procedure or discharge**Selections:***Selection Text**Definition*

No

Yes

**Supporting Definitions: Vascular Complications Requiring Intervention:**

Vascular complications can include, but are not limited to, access site occlusions, peripheral embolizations, dissections, pseudoaneurysms and/or AV fistulas. Any noted vascular complication must have had an intervention such as a fibrin injection, angioplasty, or surgical repair to qualify. Prolonged pressure does not qualify as an intervention, but ultrasonic guided compression after making a diagnosis of pseudoaneurysm does qualify. A retroperitoneal bleed or hematoma requiring transfusion is not a vascular complication under this data element.

To qualify, this adverse outcome should be attributable to this procedure and not related to a previous or subsequent procedure.

Source: NCDR



## J. Intra and Post Procedure Events

**Seq. #: 8040 Name:** RBC/Whole Blood Transfusion

**Coding Instructions:** Indicate if there was a transfusion(s) of either whole blood or packed red blood cells.

**Note(s):**

For patients with extended hospital stays, restrict coding of post-procedure events to 30 days after the last procedure.

**Target Value:** Any occurrence between start of procedure and until next procedure or discharge

**Selections:**

<i>Selection Text</i>	<i>Definition</i>
No	
Yes	

**Supporting Definitions:** (none)

**Seq. #: 8041 Name:** Hemoglobin Prior to Transfusion

**Coding Instructions:** Indicate the patient's hemoglobin value, in g/dL, prior to transfusion.

**Target Value:** The lowest value between start of procedure and until next procedure or discharge

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 8050 Name:** Bleeding Event w/in 72 Hours

**Coding Instructions:** Indicate if the patient experienced a suspected or confirmed bleeding event observed and documented in the medical record that was associated with any of the following:

1. Hemoglobin drop of  $\geq 3$  g/dL;

2. Transfusion of whole blood or packed red blood cells;

3. Procedural intervention/surgery at the bleeding site to reverse/stop or correct the bleeding (such as surgical closures/exploration of the arteriotomy site, balloon angioplasty to seal an arterial tear, endoscopy with cautery of a GI bleed).

**Note(s):**

A patient who was actively bleeding with coffee ground emesis pre-procedure should not qualify as bleeding. However, a patient with peptic ulcer disease with no noted or active bleeding prior to procedure who starts bleeding after the procedure would qualify as a "yes".

**Target Value:** Any occurrence between start of procedure and 72 hours after current procedure

**Selections:**

<i>Selection Text</i>	<i>Definition</i>
No	
Yes	

**Supporting Definitions:** (none)

## J. Intra and Post Procedure Events

**Seq. #: 8055 Name:** Bleeding at Access Site

**Coding Instructions:** Indicate if the patient experienced significant external bleeding that occurred at the access or percutaneous entry site.

To qualify, it must be associated with any of the following:

1. Hemoglobin drop of  $\geq 3$  g/dL;
2. Transfusion of whole blood or packed red blood cells;
3. Procedural intervention/surgery at the bleeding site to reverse/stop or correct the bleeding (such as surgical closures/exploration of the arteriotomy site, balloon angioplasty to seal an arterial tear, endoscopy with cautery of a GI bleed).

**Note(s):**

Acute anemia with fall in Hgb  $>3$  g/dL without other obvious source (e.g., GI, GU, operative, or hemolysis) that is attributable to intraprocedural blood loss (e.g., during equipment exchanges) should be considered bleeding at the access site, even if no hematoma is palpable or documented on imaging studies.

Prolonged pressure does not qualify as an intervention

**Target Value:** Any occurrence between start of procedure and 72 hours after current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
--------------------	-----------------------	-------------------

No		
----	--	--

Yes		
-----	--	--

**Supporting Definitions:** (none)

**Seq. #: 8060 Name:** Hematoma at Access Site

**Coding Instructions:** Indicate if the patient experienced a hematoma at the percutaneous entry site.

To qualify, it must be associated with any of the following:

1. Hemoglobin drop of  $\geq 3$  g/dL;
2. Transfusion of whole blood or packed red blood cells;
3. Procedural intervention/surgery at the bleeding site to reverse/stop or correct the bleeding (such as surgical closures/exploration of the arteriotomy site, balloon angioplasty to seal an arterial tear, endoscopy with cautery of a GI bleed).

**Target Value:** Any occurrence between start of procedure and 72 hours after current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
--------------------	-----------------------	-------------------

No		
----	--	--

Yes		
-----	--	--

**Supporting Definitions:** (none)

**Seq. #: 8061 Name:** Hematoma Size

**Coding Instructions:** Indicate the maximal dimension, in centimeters, of the hematoma (measured by palpation or imaging).

**Target Value:** The highest value between start of procedure and 72 hours after current procedure

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
--------------------	-----------------------	-------------------

<3 cm		
-------	--	--

3-5 cm		
--------	--	--

>5-10 cm		
----------	--	--

>10 cm		
--------	--	--

**Supporting Definitions:** (none)

## J. Intra and Post Procedure Events

**Seq. #: 8070 Name:** Retroperitoneal Bleeding**Coding Instructions:** Indicate if the patient experienced retroperitoneal bleeding.

To qualify, it must be associated with any of the following:

1. Hemoglobin drop of  $\geq 3$  g/dL;
2. Transfusion of whole blood or packed red blood cells;
3. Procedural intervention/surgery at the bleeding site to reverse/stop or correct the bleeding (such as surgical closures/exploration of the arteriotomy site, balloon angioplasty to seal an arterial tear, endoscopy with cauterization of a GI bleed).

**Target Value:** Any occurrence between start of procedure and 72 hours after current procedure**Selections:**

<i>Selection Text</i>	<i>Definition</i>
No	
Yes	

**Supporting Definitions:** (none)**Seq. #: 8080 Name:** Gastrointestinal Bleeding**Coding Instructions:** Indicate whether the patient experienced gastrointestinal bleeding.

To qualify, it must be associated with any of the following:

1. Hemoglobin drop of  $\geq 3$  g/dL;
2. Transfusion of whole blood or packed red blood cells;
3. Procedural intervention/surgery at the bleeding site to reverse/stop or correct the bleeding (such as surgical closures/exploration of the arteriotomy site, balloon angioplasty to seal an arterial tear, endoscopy with cauterization of a GI bleed).

**Target Value:** Any occurrence between start of procedure and 72 hours after current procedure**Selections:**

<i>Selection Text</i>	<i>Definition</i>
No	
Yes	

**Supporting Definitions:** (none)**Seq. #: 8090 Name:** Genital-Urinary Bleeding**Coding Instructions:** Indicate whether genital or urinary bleeding occurred.

To qualify, it must be associated with any of the following:

1. Hemoglobin drop of  $\geq 3$  g/dL;
2. Transfusion of whole blood or packed red blood cells;
3. Procedural intervention/surgery at the bleeding site to reverse/stop or correct the bleeding (such as surgical closures/exploration of the arteriotomy site, balloon angioplasty to seal an arterial tear, endoscopy with cauterization of a GI bleed).

**Target Value:** Any occurrence between start of procedure and 72 hours after current procedure**Selections:**

<i>Selection Text</i>	<i>Definition</i>
No	
Yes	

**Supporting Definitions:** (none)

## J. Intra and Post Procedure Events

**Seq. #:** 8100    **Name:** Other Bleeding**Coding Instructions:** Indicate if other bleeding occurred. Other bleeding includes bleeding from a site not specified, such as pulmonary bleeding.

To qualify, it must be associated with any of the following:

1. Hemoglobin drop of  $\geq 3$  g/dL;
2. Transfusion of whole blood or packed red blood cells;
3. Procedural intervention/surgery at the bleeding site to reverse/stop or correct the bleeding (such as surgical closures/exploration of the arteriotomy site, balloon angioplasty to seal an arterial tear, endoscopy with cautery of a GI bleed).

**Target Value:** Any occurrence between start of procedure and 72 hours after current procedure**Selections:**    *Selection Text*                      *Definition*

No

Yes

**Supporting Definitions:** (none)

## K. Discharge

Seq. #: 9000 Name: CABG

**Coding Instructions:** Indicate if the patient had coronary artery bypass graft (CABG) surgery.**Note(s):**

Code the appropriate selection for surgeries performed at your facility or transferred for planned CABG surgery at another facility.

**Target Value:** Any occurrence between arrival and discharge**Selections:**

<i>Selection Text</i>	<i>Definition</i>
No	
Yes	

**Supporting Definitions:** (none)

Seq. #: 9005 Name: CABG Status

**Coding Instructions:** Indicate the status of the coronary artery bypass graft (CABG) surgery.**Note(s):**

Code the appropriate selection for surgeries performed at your facility or transferred for planned CABG surgery at another facility.

**Target Value:** Any occurrence between arrival and discharge**Selections:**

<i>Selection Text</i>	<i>Definition</i>
Elective	The patient's cardiac function has been stable in the days or weeks prior to the operation. The procedure could be deferred without increased risk of compromised cardiac outcome.
Urgent	Procedure required during same hospitalization in order to minimize chance of further clinical deterioration. Examples include but are not limited to: worsening sudden chest pain, CHF, acute myocardial infarction (AMI), anatomy, IABP, unstable angina (USA) with intravenous (IV) nitroglycerin (NTG) or rest angina
Emergency	Patients requiring emergency operation will have ongoing refractory (difficulty, complicated, and unmanageable) unrelenting cardiac compromise, with or without hemodynamic instability, and not responsive to any form of therapy except cardiac surgery. An emergency operation is one in which there should be no delay in providing operative intervention. The patient's clinical status includes any of the following: a. Ischemic dysfunction (any of the following): 1. Ongoing ischemia including rest angina despite maximal medical therapy (medical or IABP). 2. Acute Evolving Myocardial Infarction with 24 hours before surgery. 3. Pulmonary edema requiring intubation.  b. Mechanical dysfunction (either of the following): 1. Shock with circulatory support 2. Shock without circulatory support.
Salvage	The patient is undergoing CPR in route to the operating room or prior to anesthesia induction.

**Supporting Definitions:** (none)

## K. Discharge

**Seq. #: 9010 Name: CABG Indication**

**Coding Instructions:** Indicate the reason coronary artery bypass graft (CABG) surgery is being performed.

**Note(s):**

Code the appropriate selection for surgeries performed at your facility or transferred for planned CABG surgery at another facility.

**Target Value:** Any occurrence between arrival and discharge

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	PCI complication	
	PCI failure without clinical deterioration	
	Treatment of CAD without PCI immediately preceding CABG	
	PCI/CABG hybrid procedure	Hybrid therapy occurs when both surgical and percutaneous coronary revascularization are planned, with different lesions treated with the different techniques. Examples include LIMA-LAD followed by PCI of the circumflex or RCA; or primary PCI of the infarct culprit RCA followed by CABG for the severe LMCA stenosis. Unplanned revascularization as a result of a complication (e.g., CABG for PCI-related dissection, PCI for acute graft closure) are NOT considered hybrid procedures because these sequential interventions were not part of a considered treatment strategy.

**Supporting Definitions:** (none)

**Seq. #: 9015 Name: CABG Location**

**Coding Instructions:** Indicate the location where the coronary artery bypass graft (CABG) surgery is being performed.

**Note(s):**

Code the appropriate selection for surgeries performed at your facility or transferred for planned CABG surgery at another facility.

**Target Value:** Any occurrence between arrival and discharge

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	At your facility	
	Transferred to other facility	

**Supporting Definitions:** (none)

**Seq. #: 9020 Name: CABG Date**

**Coding Instructions:** Indicate the date of the coronary artery bypass graft (CABG) surgery.

**Target Value:** The first value between arrival and discharge

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 9021 Name: CABG Time**

**Coding Instructions:** Indicate the time of the coronary artery bypass graft (CABG) surgery.

**Note(s):**

The time of the procedure is the time to the nearest minute, that the skin incision, or its equivalent, was made in order to start the surgical procedure.

Indicate the time (hours:minutes) using the military 24-hour clock, beginning at midnight (0000 hours).

**Target Value:** The first value on CABG Date

**Selections:** (none)

**Supporting Definitions:** (none)

## K. Discharge

**Seq. #: 9025 Name:** Other Major Surgery**Coding Instructions:** Indicate if the patient had other major surgery during this episode of care that may impact the patient's length of stay and/or clinical outcomes.**Note(s):**

Other major surgery may include other cardiac, vascular, thoracic, abdominal, peripheral or other surgical procedures.

**Target Value:** Any occurrence between arrival and discharge

Selections:	Selection Text	Definition
	No	
	Yes	

**Supporting Definitions:** (none)**Seq. #: 9030 Name:** Left Ventricular Ejection Fraction**Coding Instructions:** Code the best estimate of the current left ventricular ejection fraction closest to discharge.**Note(s):**

If no diagnostic report is in the medical record, a value documented in the medical record is acceptable.

In cases of conflicting measurements, the clinician should specify the value that they think best represents the post-procedure, or post-PCI LVEF.

If only a range is reported, report the center of the range (i.e. 50-55%, is reported as 53%).

If only a descriptive value is reported (i.e. normal), enter the corresponding percentage value from the list below:

Normal = 60%

Good function = 50%

Mildly reduced = 45%

Fair function = 40%

Moderately reduced = 30%

Poor function = 25%

Severely reduced = 20%

The Left Ventricular Ejection Fraction can be assessed via invasive (i.e. LV gram) or non-invasive (i.e. Echo, MR, CT or Nuclear) testing.

If LVEF was not performed at this facility, code "yes" for LVEF Not Assessed (9031).

**Target Value:** The last value between arrival and discharge**Selections:** (none)**Supporting Definitions:** LVEF:

The Left Ventricular Ejection Fraction is the percentage of the blood emptied from the left ventricle at the end of the contraction.

Source: NCDR, The Society of Thoracic Surgeons

**Seq. #: 9031 Name:** Left Ventricular Ejection Fraction Not Assessed**Coding Instructions:** Indicate whether the left ventricular ejection fraction was not assessed at this facility.**Target Value:** The last value between arrival and discharge

Selections:	Selection Text	Definition
	No	
	Yes	

**Supporting Definitions:** (none)

## K. Discharge

**Seq. #:** 9035    **Name:** Discharge Date**Coding Instructions:** Indicate the date on which the patient was discharged from your facility.**Note(s):**

If the deceased is an organ donor, code the Discharge Date as the date of the final organ harvest.

**Target Value:** The value on discharge**Selections:** (none)**Supporting Definitions:** (none)**Seq. #:** 9040    **Name:** Discharge Status**Coding Instructions:** Indicate whether the patient was alive or deceased at discharge.**Target Value:** The value on discharge**Selections:**

Selection Text    Definition

Alive

Deceased

**Supporting Definitions:** (none)**Seq. #:** 9045    **Name:** Discharge Location**Coding Instructions:** Indicate the location to which the patient was discharged.**Target Value:** The value on discharge**Selections:**

Selection Text    Definition

Home

Extended

care/TCU/rehabilitation

Other acute care hospital

Nursing home

Hospice

Other

Left against medical advice

The patient was discharged or eloped against medical advice.

**Supporting Definitions:** (none)



## K. Discharge

**Seq. #: 9050 Name:** Cardiac Rehabilitation Referral**Coding Instructions:** Indicate if there was written documentation of a referral for the patient (by the physician, nurse, or other personnel) to an outpatient cardiac rehabilitation program, or a documented medical or patient-centered reason why such a referral was not made.**Note(s):**

The program may include a traditional cardiac rehab program based on face-to-face interactions and training sessions or may include other options such as home-based approaches.

**Target Value:** Any occurrence between arrival and discharge

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	
	Ineligible	Ineligible may be selected for patients considered ineligible based on patient-oriented barriers (patient refusal, for example), provider-oriented criteria (patient deemed to have a high-risk condition or contraindication to exercise such as dementia, homebound, long-term nursing home placement >60 days, for example), or health care system barriers (financial barriers or lack of cardiac rehab programs near a patient's home, for example)

**Supporting Definitions: Referral:**

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

Source: Thomas RJ, King M, Lui K, et al. "AACVPR/ACC/AHA 2007 Performance Measures on Cardiac Rehabilitation for Referral to and Delivery of Cardiac Rehabilitation/Secondary Prevention Services." Journal of American College of Cardiology. 2007; 50(14), pp 1400-1433

**Seq. #: 9055 Name:** Death in Lab**Coding Instructions:** If the patient expired during this hospitalization, indicate if the patient expired while in the cath lab.**Target Value:** The value on discharge

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	No	
	Yes	

**Supporting Definitions:** (none)**Seq. #: 9060 Name:** Primary Cause of Death**Coding Instructions:** Select the PRIMARY cause of death, i.e. the first significant abnormal event which ultimately led to death.**Target Value:** Any occurrence on discharge

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	Cardiac	
	Neurologic	
	Renal	
	Vascular	
	Infection	
	Valvular	
	Pulmonary	
	Unknown	
	Other	

**Supporting Definitions:** (none)

## K. Discharge

Seq. #: 9065    Name: Hospital Status

**Coding Instructions:** Indicate if the patient was considered an outpatient for the entire stay at your facility.**Note(s):**

The Center for Medicare and Medicaid Services defines an outpatient as a patient who receives professional services in a medical facility for less than a 24-hour period regardless of the hour of admission, whether or not a bed is used, or whether or not the patient remains in the facility past midnight.

**Target Value:** The value between arrival and discharge

<b>Selections:</b>	<i>Selection Text</i>	<i>Definition</i>
	Outpatient	The patient was an outpatient for this entire episode of care.
	Outpatient converted to inpatient	The patient was considered an outpatient on arrival to the facility, and was converted to an inpatient status during this episode of care.
	Inpatient	The patient was admitted as an inpatient upon arrival to the facility, for this episode of care.

**Supporting Definitions:** (none)

## L. Medications

**Seq. #: 9500 Name:** Procedure Medications

**Coding Instructions:** Indicate which medications the patient received 24 hours prior to and during the current PCI procedure.

**Note(s):**

Complete for each PCI attempted or performed.

To code 'yes' for aspirin, the minimum dose should be at least 75mg.

**Target Value:** Any occurrence between 24 hours prior to current PCI procedure and during procedure

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 9505 Name:** Discharge Medications

**Coding Instructions:** Indicate which of the following medications the patient was prescribed upon discharge.

**Note(s):**

Complete only for patients who had a PCI procedure attempted or performed during this episode of care.

Discharge medications not required for patients who were discharged to "Other acute care hospital", "Hospice", or "Left against medical advice (AMA)".

To code 'yes' for aspirin, the minimum dose should be at least 75mg.

**Target Value:** Any occurrence on discharge

**Selections:** (none)

**Supporting Definitions:** (none)

**Seq. #: 9510 Name:** Medication Administered

**Coding Instructions:** Indicates if the medication was administered, not administered, contraindicated or blinded.

**Target Value:** N/A

Selections:	Selection Text	Definition
	No	Medication was not administered or prescribed.
	Yes	Medication was administered or prescribed.
	Contraindicated	Medication was not administered because of a contraindication. Contraindications must be documented explicitly by the physician, or clearly evidenced within the medical record.
	Blinded	Patient was in a research study or clinical trial and the administration of this specific medication or class of medications is unknown.

**Supporting Definitions:** (none)

**Seq. #: 9515 Name:** Medication ID

**Coding Instructions:** Indicates the NCDR assigned ID for the medication in effect at the time of the patient's date of arrival to your facility.

The medications that should be collected in your application are controlled by the MedicationMaster file. This file is maintained by the NCDR and will be made available on the internet for downloading and importing/updating into your application.

Each medication in the MedicationMaster file is assigned a timing indicator. This indicator is used to separate procedural medications from medications prescribed at discharge. The separation of these medications is depicted on the data collection form.

**Target Value:** N/A

**Selections:** (none)

**Supporting Definitions:** (none)

CathPCI Registry®		NCDR® CathPCI Registry® v4.4 Diagnostic Catheterization and Percutaneous Coronary Intervention Registry	
<b>A. DEMOGRAPHICS</b>			
Last Name <sup>2000</sup> :		First Name <sup>2010</sup> :	
Middle Name <sup>2020</sup> :			
SSN <sup>2030</sup> :	- - □ SSN N/A <sup>2031</sup>	Patient ID <sup>2040</sup> :	(auto) Other ID <sup>2045</sup> :
Birth Date <sup>2050</sup> :		Sex <sup>2060</sup> : <input type="radio"/> Male <input type="radio"/> Female	
Race:		<input type="checkbox"/> White <sup>2070</sup> <input type="checkbox"/> Black/African American <sup>2071</sup> <input type="checkbox"/> Asian <sup>2072</sup> (check all that apply) <input type="checkbox"/> American Indian/Alaskan Native <sup>2073</sup> <input type="checkbox"/> Native Hawaiian/Pacific Islander <sup>2074</sup>	
Hispanic or Latino Ethnicity <sup>2076</sup> :		<input type="radio"/> No <input type="radio"/> Yes	
<b>B. EPISODE OF CARE</b>			
Arrival Date/Time <sup>3000,3001</sup> :		Patient Zip Code <sup>3005</sup> : □ Zip Code N/A <sup>3006</sup>	
Admit Source <sup>3010</sup> :		<input type="radio"/> Emergency department <input type="radio"/> Transfer in from another acute care facility <input type="radio"/> Other	
Insurance Payors:		<input type="checkbox"/> Private Health Insurance <sup>3020</sup> <input type="checkbox"/> Medicare <sup>3021</sup> <input type="checkbox"/> Medicaid <sup>3022</sup> <input type="checkbox"/> Military Health Care <sup>3023</sup> (check all that apply) <input type="checkbox"/> State-Specific Plan (non-Medicaid) <sup>3024</sup> <input type="checkbox"/> Indian Health Service <sup>3025</sup> <input type="checkbox"/> Non-US Insurance <sup>3026</sup> <input type="checkbox"/> None <sup>3027</sup>	
HIC # <sup>3030</sup> :			
<b>C. HISTORY AND RISK FACTORS (ON ARRIVAL TO CATHPCI FACILITY)</b>			
Current/Recent Smoker (< 1 year) <sup>4000</sup> :		<input type="radio"/> No <input type="radio"/> Yes Height <sup>4055</sup> : (cm)	
Hypertension <sup>4005</sup> :		<input type="radio"/> No <input type="radio"/> Yes Weight <sup>4060</sup> : (kg)	
Dyslipidemia <sup>4010</sup> :		<input type="radio"/> No <input type="radio"/> Yes Currently On Dialysis <sup>4065</sup> : <input type="radio"/> No <input type="radio"/> Yes	
Family History of Premature CAD <sup>4015</sup> :		<input type="radio"/> No <input type="radio"/> Yes Cerebrovascular Disease <sup>4070</sup> : <input type="radio"/> No <input type="radio"/> Yes	
Prior MI <sup>4020</sup> :		<input type="radio"/> No <input type="radio"/> Yes Peripheral Arterial Disease <sup>4075</sup> : <input type="radio"/> No <input type="radio"/> Yes	
Prior Heart Failure <sup>4025</sup> :		<input type="radio"/> No <input type="radio"/> Yes Chronic Lung Disease <sup>4080</sup> : <input type="radio"/> No <input type="radio"/> Yes	
Prior Valve Surgery/Procedure <sup>4030</sup> :		<input type="radio"/> No <input type="radio"/> Yes Diabetes Mellitus <sup>4085</sup> : <input type="radio"/> No <input type="radio"/> Yes	
Prior PCI <sup>4035</sup> :		<input type="radio"/> No <input type="radio"/> Yes →If Yes, Diabetes Therapy <sup>4090</sup> : <input type="radio"/> None <input type="radio"/> Diet <input type="radio"/> Oral	
→If Yes, Most Recent PCI Date <sup>4040</sup> :		<input type="radio"/> Insulin <input type="radio"/> Other	
Prior CABG <sup>4045</sup> :		<input type="radio"/> No <input type="radio"/> Yes	
→If Yes, Most Recent CABG Date <sup>4050</sup> :			
<b>D. CATH LAB VISIT (COMPLETE FOR EACH CATH LAB VISIT)</b>			
<b>CLINICAL EVALUATION LEADING TO THE PROCEDURE</b>			
CAD Presentation <sup>5000</sup> : <input type="radio"/> No Sxs, no angina (14 days) <input type="radio"/> Sx unlikely to be ischemic (14 days) <input type="radio"/> Stable angina (42 days)			
<input type="radio"/> Unstable angina (60 days) <input type="radio"/> Non-STEMI (7 days) <input type="radio"/> STEMI (7 days)			
→If STEMI or Non-STEMI, Symptom Onset Date/Time <sup>5005,5006</sup> (7 days): □ Time Estimated <sup>5007</sup> □ Time Not Available <sup>5008</sup>			
→If STEMI, Thrombolytics <sup>5010</sup> : <input type="radio"/> No <input type="radio"/> Yes →If Yes, Start Date/Time <sup>5015,5016</sup> :			
Anginal Classification w/in 2 Weeks <sup>5020</sup> : <input type="radio"/> No symptoms <input type="radio"/> CCS I <input type="radio"/> CCS II <input type="radio"/> CCS III <input type="radio"/> CCS IV			
Anti-Anginal meds w/in 2 Weeks <sup>5025</sup> : <input type="radio"/> No <input type="radio"/> Yes → If Yes, Type (check all that apply):			
<input type="checkbox"/> Beta Blockers <sup>5026</sup> <input type="checkbox"/> Ca Channel Blockers <sup>5027</sup> <input type="checkbox"/> Long Acting Nitrates <sup>5028</sup> <input type="checkbox"/> Ranolazine <sup>5029</sup> <input type="checkbox"/> Other <sup>5030</sup>			
Heart Failure w/in 2 Weeks <sup>5040</sup> : <input type="radio"/> No <input type="radio"/> Yes			
→If Yes, NYHA Class w/in 2 Weeks <sup>5045</sup> : <input type="radio"/> Class I <input type="radio"/> Class II <input type="radio"/> Class III <input type="radio"/> Class IV			
Cardiomyopathy or LV Systolic Dysfunction <sup>5050</sup> :		<input type="radio"/> No <input type="radio"/> Yes Cardiogenic Shock w/in 24 Hours <sup>5060</sup> : <input type="radio"/> No <input type="radio"/> Yes	
Pre-operative Evaluation Before Non-Cardiac Surgery <sup>5055</sup> :		<input type="radio"/> No <input type="radio"/> Yes Cardiac Arrest w/in 24 Hours <sup>5065</sup> : <input type="radio"/> No <input type="radio"/> Yes	

CathPCI Registry®				NCDR® CathPCI Registry® v4.4 Diagnostic Catheterization and Percutaneous Coronary Intervention Registry			
Stress or Imaging Studies Performed <sup>5100</sup> :		<input type="radio"/> No <input type="radio"/> Yes    → If Yes, Specify Test Performed:					
Test Performed	No	Yes		Result			Risk/Extent Of Ischemia
Standard Exercise Stress Test <sup>5200,5201,5202</sup> : (w/o imaging)	<input type="radio"/>	<input type="radio"/>	→ If Yes,	<input type="radio"/> Negative <input type="radio"/> Indeterminant	<input type="radio"/> Positive <input type="radio"/> Unavailable	→ If Positive,	<input type="radio"/> Low <input type="radio"/> Intermediate <input type="radio"/> High <input type="radio"/> Unavailable
Stress Echocardiogram <sup>5210,5211,5212</sup> :	<input type="radio"/>	<input type="radio"/>	→ If Yes,	<input type="radio"/> Negative <input type="radio"/> Indeterminant	<input type="radio"/> Positive <input type="radio"/> Unavailable	→ If Positive,	<input type="radio"/> Low <input type="radio"/> Intermediate <input type="radio"/> High <input type="radio"/> Unavailable
Stress Testing w/SPECT MPI <sup>5220,5221,5222</sup> :	<input type="radio"/>	<input type="radio"/>	→ If Yes,	<input type="radio"/> Negative <input type="radio"/> Indeterminant	<input type="radio"/> Positive <input type="radio"/> Unavailable	→ If Positive,	<input type="radio"/> Low <input type="radio"/> Intermediate <input type="radio"/> High <input type="radio"/> Unavailable
Stress Testing w/CMR <sup>5230,5231,5232</sup> :	<input type="radio"/>	<input type="radio"/>	→ If Yes,	<input type="radio"/> Negative <input type="radio"/> Indeterminant	<input type="radio"/> Positive <input type="radio"/> Unavailable	→ If Positive,	<input type="radio"/> Low <input type="radio"/> Intermediate <input type="radio"/> High <input type="radio"/> Unavailable
Cardiac CTA <sup>5240,5241</sup> :	<input type="radio"/>	<input type="radio"/>	→ If Yes,	<input type="radio"/> No disease <input type="radio"/> Indeterminant	<input type="radio"/> 1VD <input type="radio"/> Unavailable	<input type="radio"/> 2VD <input type="radio"/> 3VD	
Coronary Calcium Score <sup>5250</sup> :	<input type="radio"/>	<input type="radio"/>	→ If Yes,	Calcium Score: <sup>5251</sup> _____			
PROCEDURE INFORMATION							
Procedure Date/Time <sup>5300/5301</sup> :				Fluoro Time/Dose <sup>5320,5321</sup> : _____ minutes OR _____ mGy			
PCI <sup>5305</sup> :		<input type="radio"/> No <input type="radio"/> Yes		Contrast Volume <sup>5325</sup> :			
Diagnostic Cath <sup>5310</sup> :		<input type="radio"/> No <input type="radio"/> Yes					
Other Procedure (in conj w/Dx Cath or PCI) <sup>5315</sup> :		<input type="radio"/> No <input type="radio"/> Yes					
MECHANICAL VENTRICULAR SUPPORT							
IABP <sup>5330</sup> :		<input type="radio"/> No <input type="radio"/> Yes					
→ If Yes, Timing <sup>5335</sup> :		<input type="radio"/> In place at start of procedure <input type="radio"/> Inserted during procedure and prior to PCI <input type="radio"/> Inserted after PCI has begun					
Other Mechanical Ventricular Support <sup>5340</sup> :		<input type="radio"/> No <input type="radio"/> Yes					
→ If Yes, Timing <sup>5345</sup> :		<input type="radio"/> In place at start of procedure <input type="radio"/> Inserted during procedure and prior to PCI <input type="radio"/> Inserted after PCI has begun					
ARTERIAL ACCESS:							
Arterial Access Site <sup>5350</sup> :		<input type="radio"/> Femoral <input type="radio"/> Brachial <input type="radio"/> Radial <input type="radio"/> Other					
Closure Method(s) <sup>5355</sup> :		1 2 3 4		<input type="checkbox"/> Method Not Documented <sup>5356</sup>			
E. DIAGNOSTIC CATHETERIZATION PROCEDURE (COMPLETE FOR EACH DIAGNOSTIC CATH)							
Operator's Name <sup>6000, 6005, 6010</sup> :				Operator's NPI <sup>6015</sup> :			
Diagnostic Coronary Angiography <sup>6020</sup> :		<input type="radio"/> No <input type="radio"/> Yes					
Left Heart Cath <sup>6025</sup> :		<input type="radio"/> No <input type="radio"/> Yes					
Cardiac Transplant Evaluation <sup>6030</sup> :		<input type="radio"/> No <input type="radio"/> Yes					
→ If Yes, Type <sup>6035</sup> :		<input type="radio"/> Donor for cardiac transplant <input type="radio"/> Candidate to receive a cardiac transplant <input type="radio"/> Post cardiac transplant follow up					
Diag Cath Status <sup>6040</sup> :		<input type="radio"/> Elective <input type="radio"/> Urgent <input type="radio"/> Emergency <input type="radio"/> Salvage					
Rx Recommendation <sup>6045</sup> : (after diagnostic cath)		<input type="radio"/> None <input type="radio"/> Medical therapy and/or counseling <input type="radio"/> PCI w/o planned CABG <input type="radio"/> CABG (including planned hybrid CABG/PCI procedures) <input type="radio"/> Other cardiac therapy without CABG or PCI					

## F. BEST ESTIMATE OF CORONARY ANATOMY (COMPLETE FOR EACH CATH LAB VISIT)

Dominance<sup>6100</sup>: ☐ Left ☐ Right ☐ Co-dominant

Coronary Territory	Native Artery Percent Stenosis in ≥2mm vessels	Grafts Supplying Coronary Territory (Note 1) Percent Stenosis
Left Main	_____ % <sup>6110</sup> <input type="checkbox"/> Not Available <sup>6111</sup>	
Prox LAD	_____ % <sup>6120</sup> <input type="checkbox"/> Not Available <sup>6121</sup>	_____ % <sup>6170</sup> <input type="checkbox"/> Not Available <sup>6171</sup>
Mid/Distal LAD, Diag Branches	_____ % <sup>6130</sup> <input type="checkbox"/> Not Available <sup>6131</sup>	_____ % <sup>6180</sup> <input type="checkbox"/> Not Available <sup>6181</sup>
Circ, OMs, LPDA, LPL Branches	_____ % <sup>6140</sup> <input type="checkbox"/> Not Available <sup>6141</sup>	_____ % <sup>6190</sup> <input type="checkbox"/> Not Available <sup>6191</sup>
RCA, RPDA, RPL, AM Branches	_____ % <sup>6150</sup> <input type="checkbox"/> Not Available <sup>6151</sup>	_____ % <sup>6200</sup> <input type="checkbox"/> Not Available <sup>6201</sup>
Ramus	_____ % <sup>6160</sup> <input type="checkbox"/> Not Available <sup>6161</sup>	_____ % <sup>6210</sup> <input type="checkbox"/> Not Available <sup>6211</sup>

## G. PCI PROCEDURE (COMPLETE FOR EACH CATH LAB VISIT IN WHICH A PCI WAS ATTEMPTED OR PERFORMED)

Operator's Name<sup>7000,7005,7010</sup>:Operator's NPI<sup>7015</sup>:PCI Status<sup>7020</sup>: ☐ Elective ☐ Urgent ☐ Emergency ☐ SalvagePre-PCI LVEF<sup>7025</sup>: \_\_\_\_\_ % ☐ Pre-PCI LVEF Not Assessed<sup>7026</sup>Cardiogenic Shock at Start of PCI<sup>7030</sup>: ☐ No ☐ Yes

PCI Indication<sup>7035</sup>: ☐ Immediate PCI for STEMI ☐ PCI for STEMI (Unstable, >12 hrs from Sx onset)  
☐ PCI for STEMI (Stable, >12 from hrs Sx onset) ☐ PCI for STEMI (stable after successful full-dose Thrombolysis)  
☐ Rescue PCI for STEMI (after failed full-dose lytics) ☐ PCI for high risk Non-STEMI or unstable angina  
☐ Staged PCI ☐ Other

→ If Immediate PCI for STEMI, STEMI or STEMI Equivalent First Noted<sup>7040</sup>: ☐ First ECG ☐ Subsequent ECG→ If Subsequent ECG, Subsequent ECG with STEMI or STEMI Equivalent Date/Time<sup>7045, 7046</sup>: \_\_\_\_\_→ If Immediate PCI for STEMI, First Device Activation Date/Time<sup>7050,7051</sup>: \_\_\_\_\_→ If Immediate PCI for STEMI, Transferred In for Immediate PCI for STEMI<sup>7055</sup>: ☐ No ☐ Yes→ If Yes, Date/Time ED Presentation at Referring Facility<sup>7060,7061</sup>: \_\_\_\_\_→ If Immediate PCI for STEMI, Non-System Reason for Delay in PCI<sup>7065</sup>:

- ☐ Difficult vascular access ☐ Cardiac arrest and/or need for intubation before PCI  
☐ Patient delays in providing consent for the procedure ☐ Difficulty crossing the culprit lesion during the PCI procedure  
☐ Other ☐ None

## PROCEDURE MEDICATIONS (ADMINISTERED WITHIN 24 HOURS PRIOR TO AND DURING THE PCI PROCEDURE)

Category	Medication <sup>9500</sup>	Administered <sup>9510</sup>
Anticoagulants	Fondaparinux	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Contraindicated <input type="radio"/> Blinded
	Low Molecular Weight Heparin (any)	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Contraindicated <input type="radio"/> Blinded
	Unfractionated Heparin (any)	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Contraindicated <input type="radio"/> Blinded
Aspirin	Aspirin (any)	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Contraindicated <input type="radio"/> Blinded
Direct Thrombin Inhibitors	Bivalirudin	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Contraindicated <input type="radio"/> Blinded
	Direct Thrombin Inhibitor (other)	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Contraindicated <input type="radio"/> Blinded
Glycoprotein IIb/IIIa Inhibitors	GP IIb/IIIa (any)	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Contraindicated <input type="radio"/> Blinded
Thienopyridines	Clopidogrel	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Contraindicated <input type="radio"/> Blinded
	Ticlopidine	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Contraindicated <input type="radio"/> Blinded
	Prasugrel	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Contraindicated <input type="radio"/> Blinded
	Ticagrelor	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Contraindicated <input type="radio"/> Blinded

Note 1: CABG Date<sup>9020</sup> must be less than Procedure Date/Time<sup>5300/5301</sup> or Prior CABG<sup>4045</sup> = "Yes" to complete these elements.

## H. LESIONS AND DEVICES (COMPLETE FOR EACH PCI ATTEMPTED OR PERFORMED)

<b>Lesion Counter</b> <sup>7100</sup> :	<b>1</b>	<b>2</b>
<b>Segment Number(s)</b> <sup>7105</sup> :	_____, _____, _____, _____, _____	_____, _____, _____, _____, _____
If CAD Presentation <sup>5000</sup> is 'STEMI', 'Non-STEMI', or 'Unstable angina', <b>Culprit Lesion</b> <sup>7110</sup> :	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Unknown
<b>Stenosis Immediately Prior to Rx</b> <sup>7115</sup> :	_____ %	_____ %
→ If 100%, <b>Chronic Total Occlusion</b> <sup>7120</sup> :	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes
→ If 40-70%, <b>IVUS</b> <sup>7125</sup> :	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes
→ If 40-70%, <b>FFR</b> <sup>7130</sup> :	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes
→ If Yes, <b>FFR Ratio</b> <sup>7135</sup> :	_____	_____
<b>Pre-procedure TIMI Flow</b> <sup>7140</sup> :	<input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3	<input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3
<b>Prev Treated Lesion</b> <sup>7145</sup> :	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes
→ If Yes, <b>Timeframe</b> <sup>7150</sup> :	<input type="radio"/> < 1 month <input type="radio"/> 1-5 months <input type="radio"/> 6-12 months	<input type="radio"/> < 1 month <input type="radio"/> 1-5 months <input type="radio"/> 6-12 months
→ If Yes, <b>Treated with Stent</b> <sup>7155</sup> :	<input type="radio"/> 1-2 years <input type="radio"/> >2 years <input type="radio"/> Time unknown	<input type="radio"/> 1-2 years <input type="radio"/> >2 years <input type="radio"/> Time unknown
→ If Yes, <b>In-Stent Restenosis</b> <sup>7160</sup> :	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes
→ If Yes, <b>In-Stent Thrombosis</b> <sup>7165</sup> :	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes
<b>Stent Type</b> <sup>7170</sup> :	<input type="radio"/> DES <input type="radio"/> Non-DES <input type="radio"/> Type unknown	<input type="radio"/> DES <input type="radio"/> Non-DES <input type="radio"/> Type unknown
<b>Lesion in Graft</b> <sup>7175</sup> :	<input type="radio"/> Not in Graft <input type="radio"/> Vein <input type="radio"/> LIMA <input type="radio"/> Other artery	<input type="radio"/> Not in Graft <input type="radio"/> Vein <input type="radio"/> LIMA <input type="radio"/> Other artery
→ If Vein, LIMA, Other, <b>Location in Graft</b> <sup>7180</sup> :	<input type="radio"/> Aortic <input type="radio"/> Body <input type="radio"/> Distal	<input type="radio"/> Aortic <input type="radio"/> Body <input type="radio"/> Distal
<b>Lesion Complexity</b> <sup>7185</sup> :	<input type="radio"/> Non-High/Non-C <input type="radio"/> High/C	<input type="radio"/> Non-High/Non-C <input type="radio"/> High/C
<b>Lesion Length (mm)</b> <sup>7190</sup> :	_____ mm	_____ mm
<b>Thrombus Present</b> <sup>7195</sup> :	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes
<b>Bifurcation Lesion</b> <sup>7200</sup> :	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes
<b>Guidewire Across Lesion</b> <sup>7205</sup> :	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes
→ If Yes, <b>Stenosis Post-Procedure</b> <sup>7210</sup> :	_____ %	_____ %
→ If Yes, <b>Post-Procedure TIMI Flow</b> <sup>7215</sup> :	<input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3	<input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3
→ If Yes, <b>Device(s) Deployed</b> <sup>7220</sup> :	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes

Intracoronary Device(s) Used <sup>7225</sup>		Associated Lesion(s) <sup>7100</sup>	Diameter <sup>7235</sup>	Length <sup>7240</sup>
1		_____, _____, _____		
2		_____, _____, _____		
3		_____, _____, _____		
4		_____, _____, _____		
5				

**INTRAPROCEDURE EVENTS**      **Significant Dissection**<sup>7245</sup>: ☐ No ☐ Yes      **Perforation**<sup>7250</sup>: ☐ No ☐ Yes

## I. LABS (COMPLETE FOR EACH CATH LAB VISIT IN WHICH A PCI WAS ATTEMPTED OR PERFORMED)

Pre-Procedure (performed at your facility)	Post-Procedure (post-procedure only)
<b>CK-MB</b> <sup>7300</sup> _____ ng/mL <input type="checkbox"/> CK Not Applicable <sup>7301</sup> <input type="checkbox"/> CK Drawn and Normal <sup>7302</sup>	<b>CK-MB</b> <sup>7325</sup> _____ ng/mL <input type="checkbox"/> CK Not Applicable <sup>7326</sup> (peak value 6-24 hrs) <input type="checkbox"/> CK Drawn and Normal <sup>7327</sup>
<b>Troponin I</b> <sup>7305</sup> _____ ng/mL <input type="checkbox"/> Not Drawn <sup>7306</sup>	<b>Troponin I</b> <sup>7330</sup> _____ ng/mL <input type="checkbox"/> Not Drawn <sup>7331</sup> (peak value 6-24 hrs)
<b>Troponin T</b> <sup>7310</sup> _____ ng/mL <input type="checkbox"/> Not Drawn <sup>7311</sup>	<b>Troponin T</b> <sup>7335</sup> _____ ng/mL <input type="checkbox"/> Not Drawn <sup>7336</sup> (peak value 6-24 hrs)
<b>Creatinine</b> <sup>7315</sup> _____ mg/dL <input type="checkbox"/> Not Drawn <sup>7316</sup>	<b>Creatinine</b> <sup>7340</sup> _____ mg/dL <input type="checkbox"/> Not Drawn <sup>7341</sup> (highest value)
<b>Hemoglobin</b> <sup>7320</sup> _____ g/dL <input type="checkbox"/> Not Drawn <sup>7321</sup>	<b>Hemoglobin</b> <sup>7345</sup> _____ g/dL <input type="checkbox"/> Not Drawn <sup>7346</sup> (lowest w/in 72 hrs)



## J. INTRA AND POST-PROCEDURE EVENTS (COMPLETE FOR EACH CATH LAB VISIT)

<b>Myocardial Infarction</b> <sup>8000</sup> : (Positive Biomarkers)	<input type="radio"/> No <input type="radio"/> Yes	<b>Bleeding Event w/in 72 Hours</b> <sup>8050</sup> :	<input type="radio"/> No <input type="radio"/> Yes
<b>Cardiogenic Shock</b> <sup>8005</sup> :	<input type="radio"/> No <input type="radio"/> Yes	→If Yes, <b>Bleeding at Access Site</b> <sup>8055</sup> :	<input type="radio"/> No <input type="radio"/> Yes
<b>Heart Failure</b> <sup>8010</sup> :	<input type="radio"/> No <input type="radio"/> Yes	→If Yes, <b>Hematoma at Access Site</b> <sup>8060</sup> :	<input type="radio"/> No <input type="radio"/> Yes
<b>CVA/Stroke</b> <sup>8015</sup> :	<input type="radio"/> No <input type="radio"/> Yes	→If Yes, <b>Size</b> <sup>8061</sup> : <input type="radio"/> <3cm <input type="radio"/> 3-5cm <input type="radio"/> >5-10 <input type="radio"/> >10cm	
→If Yes, <b>Hemorrhagic Stroke</b> <sup>8021</sup> :	<input type="radio"/> No <input type="radio"/> Yes	→If Yes, <b>Retroperitoneal Bleeding</b> <sup>8070</sup> :	<input type="radio"/> No <input type="radio"/> Yes
<b>Tamponade</b> <sup>8025</sup> :	<input type="radio"/> No <input type="radio"/> Yes	→If Yes, <b>GI Bleed</b> <sup>8080</sup> :	<input type="radio"/> No <input type="radio"/> Yes
<b>New Requirement for Dialysis</b> <sup>8030</sup> :	<input type="radio"/> No <input type="radio"/> Yes	→If Yes, <b>GU Bleed</b> <sup>8090</sup> :	<input type="radio"/> No <input type="radio"/> Yes
<b>Other Vascular Complications Req Rx</b> <sup>8035</sup> :	<input type="radio"/> No <input type="radio"/> Yes	→If Yes, <b>Other Bleed</b> <sup>8100</sup> :	<input type="radio"/> No <input type="radio"/> Yes
<b>RBC/Whole Blood Transfusion</b> <sup>8040</sup> :	<input type="radio"/> No <input type="radio"/> Yes		
→If Yes, <b>Hgb Prior to Transfusion</b> <sup>8041</sup> :	_____ g/dL		

## K. DISCHARGE (COMPLETE THIS SECTION FOR EACH EPISODE OF CARE)

<b>CABG</b> <sup>9000</sup> :	<input type="radio"/> No <input type="radio"/> Yes
→ If Yes, <b>CABG Status</b> <sup>9005</sup> :	<input type="radio"/> Elective <input type="radio"/> Urgent <input type="radio"/> Emergency <input type="radio"/> Salvage
→ If Yes, <b>CABG Indication</b> <sup>9010</sup> :	<input type="radio"/> PCI complication <input type="radio"/> PCI failure without clinical deterioration <input type="radio"/> Treatment of CAD without PCI immediately preceding CABG <input type="radio"/> PCI/CABG hybrid procedure
→If Yes, <b>Location</b> <sup>9015</sup> :	<input type="radio"/> At your facility <input type="radio"/> Transferred to other facility
→If At your facility, <b>CABG Date/Time</b> <sup>9020,9021</sup> :	
<b>Other Major Surgery</b> <sup>9025</sup> :	<input type="radio"/> No <input type="radio"/> Yes
<b>LVEF</b> <sup>9030</sup> :	% <input type="checkbox"/> LVEF Not Assessed <sup>9031</sup>
<b>Discharge Date</b> <sup>9035</sup> :	
<b>Discharge Status</b> <sup>9040</sup> :	<input type="radio"/> Alive <input type="radio"/> Deceased
→If Alive, <b>Discharge Location</b> <sup>9045</sup> :	<input type="radio"/> Home <input type="radio"/> Extended care/TCU/rehab <input type="radio"/> Other acute care hospital <input type="radio"/> Nursing home <input type="radio"/> Hospice <input type="radio"/> Other <input type="radio"/> Left against medical advice (AMA)
→If Alive, <b>Cardiac Rehabilitation Referral</b> <sup>9050</sup> :	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Ineligible
→If Deceased, <b>Death in Lab</b> <sup>9055</sup> :	<input type="radio"/> No <input type="radio"/> Yes
→If Deceased, <b>Primary Cause of Death</b> <sup>9060</sup> :	<input type="radio"/> Cardiac <input type="radio"/> Neurologic <input type="radio"/> Renal <input type="radio"/> Vascular <input type="radio"/> Infection <input type="radio"/> Valvular <input type="radio"/> Pulmonary <input type="radio"/> Unknown <input type="radio"/> Other
<b>Hospital Status</b> <sup>9065</sup> :	<input type="radio"/> Outpatient <input type="radio"/> Outpatient converted to inpatient <input type="radio"/> Inpatient

## DISCHARGE MEDICATIONS (PRESCRIBED AT DISCHARGE – COMPLETE FOR EACH EPISODE OF CARE IN WHICH A PCI WAS ATTEMPTED OR PERFORMED)

Category	Medication <sup>9505</sup>	Administered <sup>9510</sup>
Discharge medications are not required for patients who expired or were discharged to 'Other acute care Hospital', 'Hospice', or 'AMA'.		
ACE Inhibitors	ACE Inhibitor (any)	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Contraindicated <input type="radio"/> Blinded
ARBs	ARB (any)	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Contraindicated <input type="radio"/> Blinded
Aspirin	Aspirin (any)	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Contraindicated <input type="radio"/> Blinded
Beta Blockers	Beta Blocker (any)	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Contraindicated <input type="radio"/> Blinded
Lipid Lowering Agents	Statin (any)	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Contraindicated <input type="radio"/> Blinded
	Non-Statin (any)	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Contraindicated <input type="radio"/> Blinded
Thienopyridines	Clopidogrel	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Contraindicated <input type="radio"/> Blinded
	Ticlopidine	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Contraindicated <input type="radio"/> Blinded
	Prasugrel	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Contraindicated <input type="radio"/> Blinded
	Ticagrelor	<input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> Contraindicated <input type="radio"/> Blinded



## **Comprehensive Documentation of Indications for PCI**

### **Measure Calculation Description**

#### **Denominator:**

Include all PCI procedures performed for patients aged 18 years and older

#### **Numerator:**

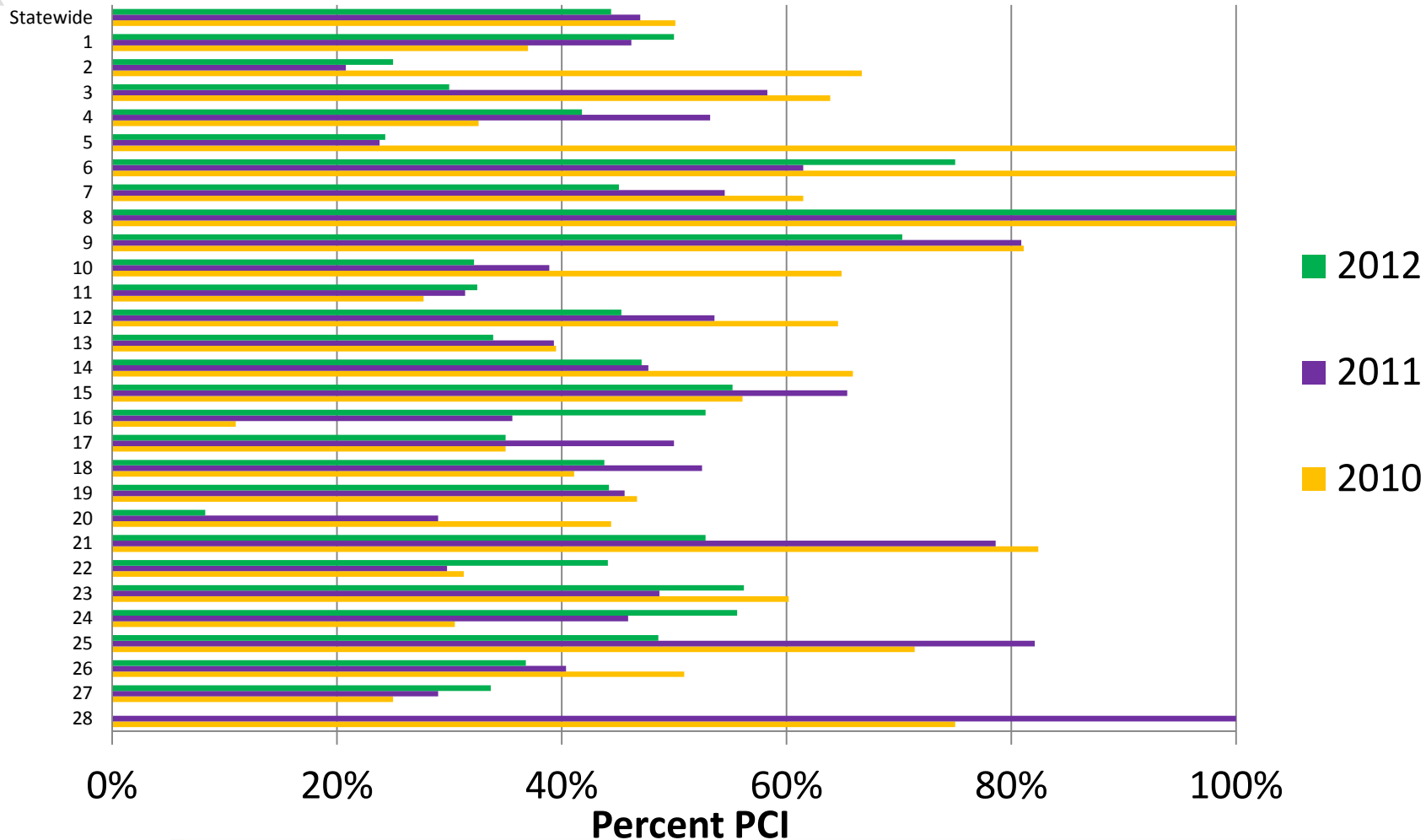
- For all PCI procedures, each of the following elements must be included to meet the measure.
  - The numerical values correspond with the fields in the NCDR CathPCI Data Collection Form, which is also included with this submission in Appendix A.1.
1. Documentation of priority status of PCI [7020]
  2. Documentation of either severity of angina symptoms within 2 weeks prior to PCI procedure **OR** absence of angina symptoms within 2 weeks prior to PCI procedure [5020]
  3. Documentation of use of anti-anginal medications within 2 weeks prior to PCI procedure **OR** non-use of anti-anginal medications within 2 weeks prior to PCI procedure [5025]
  4. Documentation of whether stress or imaging studies were performed within 6 months prior to PCI procedure [5100]
  5. Documentation of results of stress or imaging studies results performed within 6 months prior to PCI procedure [5200, 5201, 5202, 5210, 5211, 5212, 52220, 5221, 5222, 5230, 5231, 5232, 5240, 5241, 5250]
  6. Documentation of significance of angiographic stenosis (qualitative or quantitative) prior to PCI, [5240, 5241]



CLINICAL **OUTCOMES ASSESSMENT** PROGRAM  
A PROGRAM OF THE FOUNDATION FOR HEALTH CARE QUALITY

# Insufficient Data – Non-acute

Facility



## Contents

0. Performance Measure Name.....	2
1. Section 1b.2.....	2
1.1: Quarterly Rates .....	2
1.2 Descriptive Statistics in 2011 at Site Level (Sites with 10 or more elective procedures) .....	2
1.3 Descriptive Statistics in 2012 at Site Level (Sites with 10 or more elective procedures) .....	3
2. 1b.4 Disparities .....	4
2.1: Disparities by Gender.....	4
2.2: Disparities by Race .....	5
2.3: Disparities by Insurance .....	5
2.4: Disparities by Hospital Teaching status .....	6
2.5: Disparities by Hospital Community.....	7
3. 1.3 Dates .....	8
4. 1.5 Description of sites 2012.....	8
5. 1.6 Description of the patient Population (2012) .....	8
6. 2a2.1-2a2.4 Level of Reliability .....	12
7. Section 2b3 Exclusions .....	13
8. Section 2b5.....	14
8.1 2b5.1 .....	14
8.2 2b5.2 .....	14
9. Section 2b7: Missing Data.....	14

## 0. Performance Measure Name

### PCI: Comprehensive Documentation of Indications for PCI

**Note: “Not Mappable to AUC” in the tables below= No comprehensive documentation of indication for PCI (did not meet measure)**

## 1. Section 1b.2

### 1.1: Quarterly Rates

AUC										
	Total	timeframecode								P-Value
	n = 295485	2011Q1 n = 43373	2011Q2 n = 44195	2011Q3 n = 37611	2011Q4 n = 35008	2012Q1 n = 36885	2012Q2 n = 35087	2012Q3 n = 32643	2012Q4 n = 30683	
Not Mappable to AUC	114962 (38.9%)	18796 (43.3%)	18378 (41.6%)	15097 (40.1%)	13628 (38.9%)	14058 (38.1%)	12957 (36.9%)	11509 (35.3%)	10539 (34.3%)	< 0.001
Continuous variables compared using one-way analysis of variance. Categorical variables compared using chi-square or Fisher's exact test.										

## 1.2 Descriptive Statistics in 2011 at Site Level (Sites with 10 or more elective procedures)

Analysis Variable : Proportion Unmappable							
Number of Sites	Mean	Minimum	Lower Quartile	Median	Upper Quartile	Maximum	Quartile Range
1146	0.4162694	0	0.2800000	0.3953488	0.5403587	1.0000000	0.2603587

By Decile:

10 <sup>th</sup> Percentile	20 <sup>th</sup> Percentile	30 <sup>th</sup> Percentile	40 <sup>th</sup> Percentile	50 <sup>th</sup> Percentile	60 <sup>th</sup> Percentile	70 <sup>th</sup> Percentile	80 <sup>th</sup> Percentile	90 <sup>th</sup> Percentile
0.19008	0.25	0.30827	0.35	0.39535	0.45215	0.50127	0.58416	0.6875

### 1.3 Descriptive Statistics in 2012 at Site Level (Sites with 10 or more elective procedures)

Analysis Variable : Proportion Unmappable							
Number of Sites	Mean	Minimum	Lower Quartile	Median	Upper Quartile	Maximum	Quartile Range
1178	0.3685528	0	0.2380952	0.3465463	0.4842767	0.9444444	0.2461815

By Decile:

10 <sup>th</sup> Percentile	20 <sup>th</sup> Percentile	30 <sup>th</sup> Percentile	40 <sup>th</sup> Percentile	50 <sup>th</sup> Percentile	60 <sup>th</sup> Percentile	70 <sup>th</sup> Percentile	80 <sup>th</sup> Percentile	90 <sup>th</sup> Percentile
0.15152	0.21739	0.26154	0.30556	0.34655	0.39130	0.45	0.52381	0.62931

## 2. 1b.4 Disparities

### 2.1: Disparities by Gender

	Total	Sex		
2011 Data	n = 160187	Male n = 111382	Female n = 48805	P-Value
<b>AUC</b>				
Not Mappable to AUC	65899 (41.14%)	46736 (41.96%)	19163 (39.26%)	< 0.001
Continuous variables compared using Student's T-test. Categorical variables compared using chi-square or Fisher's exact test.				

	Total	Sex		
2012 Data	n = 135298	Male n = 94735	Female n = 40563	P-Value
<b>AUC</b>				
Not Mappable to AUC	49063 (36.26%)	34906 (36.85%)	14157 (34.90%)	< 0.001
Continuous variables compared using Student's T-test. Categorical variables compared using chi-square or Fisher's exact test.				

## 2.2: Disparities by Race

	Total	racecat			
2011 Data	n = 160187	1 Caucasian n = 140998	2 Af Am n = 12541	3 Other n = 6648	P-Value
<b>AUC</b>					
Not Mappable to AUC	65899 (41.14%)	58276 (41.33%)	4965 (39.59%)	2658 (39.98%)	< 0.001
Continuous variables compared using one-way analysis of variance. Categorical variables compared using chi-square or Fisher's exact test.					

	Total	racecat			
2012 Data	n = 135298	1 Caucasian n = 118007	2 Af Am n = 10421	3 Other n = 6870	P-Value
<b>AUC</b>					
Not Mappable to AUC	49063 (36.26%)	43141 (36.56%)	3652 (35.04%)	2270 (33.04%)	< 0.001
Continuous variables compared using one-way analysis of variance. Categorical variables compared using chi-square or Fisher's exact test.					

## 2.3: Disparities by Insurance

2011 Data	Total	inscat					P-Value
	n = 160187	1 Private n = 109393	2 Medicare n = 38420	3 Medicaid n = 4952	4 Other n = 2868	5 None n = 4554	
<b>AUC</b>							
Not Mappable to AUC	65899 (41.14%)	44726 (40.89%)	15826 (41.19%)	2001 (40.41%)	1211 (42.22%)	2135 (46.88%)	< 0.001
Continuous variables compared using one-way analysis of variance. Categorical variables compared using chi-square or Fisher's exact test.							

2012 Data	Total	inscat					P-Value
	n = 135298	1 Private n = 93007	2 Medicare n = 31815	3 Medicaid n = 3947	4 Other n = 2374	5 None n = 4155	
<b>AUC</b>							
Not Mappable to AUC	49063 (36.26%)	33361 (35.87%)	11592 (36.44%)	1394 (35.32%)	916 (38.58%)	1800 (43.32%)	< 0.001
Continuous variables compared using one-way analysis of variance. Categorical variables compared using chi-square or Fisher's exact test.							

## 2.4: Disparities by Hospital Teaching status

2011 Data	Total	Teaching Hospital		P-Value
	n = 160187	1 n = 80639	0 n = 79548	
<b>AUC</b>				
Not Mappable to AUC	65899 (41.14%)	31645 (39.24%)	34254 (43.06%)	< 0.001
Continuous variables compared using Student's T-test. Categorical variables compared using chi-square or Fisher's exact test.				



2012 Data	Total	Teaching Hospital		P-Value
	n = 135298	1 n = 68307	0 n = 66991	
<b>AUC</b>				
Not Mappable to AUC	49063 (36.26%)	24067 (35.23%)	24996 (37.31%)	< 0.001
Continuous variables compared using Student's T-test. Categorical variables compared using chi-square or Fisher's exact test.				

## 2.5: Disparities by Hospital Community

2011 Data	Total	Hospital Location			P-Value
	n = 160187	RURAL n = 16877	SUBURBAN n = 50047	URBAN n = 93263	
<b>AUC</b>					
Not Mappable to AUC	65899 (41.14%)	7240 (42.90%)	20508 (40.98%)	38151 (40.91%)	< 0.001
Continuous variables compared using one-way analysis of variance. Categorical variables compared using chi-square or Fisher's exact test.					

2012 Data	Total	Hospital Location			P-Value
	n = 135298	RURAL n = 15407	SUBURBAN n = 40949	URBAN n = 78942	
<b>AUC</b>					
Not Mappable to AUC	49063 (36.26%)	5936 (38.53%)	14735 (35.98%)	28392 (35.97%)	< 0.001
Continuous variables compared using one-way analysis of variance. Categorical variables compared using chi-square or Fisher's exact test.					

### 3. 1.3 Dates

The primary analysis included elective PCI's in the CATHPCI Registry from 1/1/2012 thru 12/31/2012. Additionally we used data from 1/1/2011 thru 12/31/2011 for temporal comparisons.

### 4. 1.5 Description of sites 2012

	Total
	n = 1309
<b>AUC</b>	
PCI Volume in 2012	503.3 ± 424.8
Hospital Location	
RURAL	240 (18.3%)
SUBURBAN	460 (35.1%)
URBAN	609 (46.5%)
Participant Type	
GOVERNMENT	19 (1.5%)
PRIVATE/COMMUNITY	1178 (90.0%)
UNIVERSITY	112 (8.6%)
Teaching Hospital	502 (38.3%)
Public Hospital	483 (36.9%)
Census Region	
MIDWEST REGION	377 (28.8%)
NORTHEAST REGION	172 (13.1%)
SOUTH REGION	507 (38.8%)
WEST REGION	252 (19.3%)
Missing	1

### 5. 1.6 Description of the patient Population (2012)

AUC			
	Total	Not Mappable to AUC n = 49063	Mappable to AUC n = 86235
	n = 135298		
<b>History</b>			
Age	66.5 ± 10.9	66.5 ± 11.1	66.5 ± 10.9
Sex			
Male	94735 (70.0%)	34906 (71.1%)	59829 (69.4%)
Female	40563 (30.0%)	14157 (28.9%)	26406 (30.6%)
IABP	771 (0.6%)	313 (0.6%)	458 (0.5%)
Missing (.)	36	12	24
Current/Recent Smoker (w/in 1 year)	27104 (20.0%)	10399 (21.2%)	16705 (19.4%)
Missing (.)	91	46	45
Hypertension	117498 (86.9%)	42403 (86.5%)	75095 (87.1%)
Missing (.)	40	18	22
Dyslipidemia	115183 (85.2%)	41784 (85.2%)	73399 (85.2%)
Missing (.)	105	44	61
Family History of Premature CAD	33607 (24.9%)	12125 (24.7%)	21482 (24.9%)
Missing (.)	62	33	29
Prior MI	43233 (32.0%)	18828 (38.4%)	24405 (28.3%)
Missing (.)	34	22	12
Prior Heart Failure	18974 (14.0%)	7435 (15.2%)	11539 (13.4%)
Missing (.)	74	41	33
Prior Valve Surgery/Procedure	2505 (1.9%)	1081 (2.2%)	1424 (1.7%)
Missing (.)	77	36	41
Prior PCI	63566 (47.0%)	26145 (53.3%)	37421 (43.4%)
Missing (.)	29	19	10
Prior CABG	26026 (19.2%)	13587 (27.7%)	12439 (14.4%)
Missing (.)	16	16	
Currently on Dialysis	3957 (2.9%)	1374 (2.8%)	2583 (3.0%)
Missing (.)	152	63	89

AUC			
	Total	Not Mappable to AUC n = 49063	Mappable to AUC n = 86235
	n = 135298		
Cerebrovascular Disease Missing (.)	18068 (13.4%) 63	6652 (13.6%) 30	11416 (13.2%) 33
Peripheral Arterial Disease Missing (.)	19454 (14.4%) 72	7148 (14.6%) 35	12306 (14.3%) 37
Chronic Lung Disease Missing (.)	19754 (14.6%) 66	7115 (14.5%) 31	12639 (14.7%) 35
Diabetes Mellitus Missing (.)	54312 (40.2%) 77	19668 (40.1%) 36	34644 (40.2%) 41
<b>Cath Lab Visit</b>			
PCI Indication Staged PCI Other Missing (.)	29487 (21.8%) 105754 (78.2%) 57	20308 (41.4%) 28738 (58.6%) 17	9179 (10.6%) 77016 (89.4%) 40
CAD Presentation No symptom, no angina Symptom unlikely to be ischemic Stable angina	36791 (27.2%) 13069 (9.7%) 85438 (63.1%)	18006 (36.7%) 4266 (8.7%) 26791 (54.6%)	18785 (21.8%) 8803 (10.2%) 58647 (68.0%)
Anginal Classification w/in 2 Weeks No symptoms CCS I CCS II CCS III CCS IV Missing (.)	40621 (30.1%) 14016 (10.4%) 50144 (37.1%) 26204 (19.4%) 4116 (3.0%) 197	19208 (39.3%) 5477 (11.2%) 18197 (37.2%) 4736 (9.7%) 1248 (2.6%) 197	21413 (24.8%) 8539 (9.9%) 31947 (37.0%) 21468 (24.9%) 2868 (3.3%)
Anti-Anginal Medication w/in 2 Weeks Missing (.)	103853 (76.8%) 46	38304 (78.1%) 37	65549 (76.0%) 9
Heart Failure w/in 2 Weeks Missing (.)	13711 (10.1%) 58	4890 (10.0%) 20	8821 (10.2%) 38
Cardiomyopathy or Left Ventricular Systolic Dysfunction Missing (.)	18071 (13.4%) 26	6594 (13.4%) 11	11477 (13.3%) 15

AUC			
	Total	Not Mappable to AUC n = 49063	Mappable to AUC n = 86235
	n = 135298		
Pre-operative Evaluation Before Non-Cardiac Surgery Missing (.)	7615 (5.6%) 31	2081 (4.2%) 19	5534 (6.4%) 12
Cardiogenic Shock w/in 24 Hours Missing (.)	487 (0.4%) 13	198 (0.4%) 2	289 (0.3%) 11
Cardiac Arrest w/in 24 Hours Missing (.)	614 (0.5%) 32	263 (0.5%) 15	351 (0.4%) 17
Pre-PCI Left Ventricular Ejection Fraction Missing	53.5 ± 12.3 30945	52.4 ± 12.6 13843	54.1 ± 12.2 17102
<b>Procedure Information</b>			
Contrast Volume Missing	186.0 ± 90.6 333	179.3 ± 91.5 131	189.9 ± 89.8 202
Fluoroscopy Time Missing	15.6 ± 12.8 1704	15.2 ± 12.9 636	15.8 ± 12.8 1068
<b>Outcomes</b>			
Discharge Status Alive Deceased	134789 (99.6%) 509 (0.4%)	48854 (99.6%) 209 (0.4%)	85935 (99.7%) 300 (0.3%)
Primary Cause of Death Cardiac Neurologic Renal Vascular Infection Valvular Pulmonary Unknown Other Missing (.)	328 (64.6%) 33 (6.5%) 10 (2.0%) 8 (1.6%) 19 (3.7%) 18 (3.5%) 46 (9.1%) 18 (3.5%) 28 (5.5%) 134790	132 (63.2%) 17 (8.1%) 2 (1.0%) 1 (0.5%) 8 (3.8%) 8 (3.8%) 17 (8.1%) 12 (5.7%) 12 (5.7%) 48854	196 (65.6%) 16 (5.4%) 8 (2.7%) 7 (2.3%) 11 (3.7%) 10 (3.3%) 29 (9.7%) 6 (2.0%) 16 (5.4%) 85936
Myocardial Infarction (Biomarker Positive) Missing (.)	2644 (2.0%) 34	929 (1.9%) 16	1715 (2.0%) 18

AUC			
	Total	Not Mappable to AUC n = 49063	Mappable to AUC n = 86235
	n = 135298		
Cardiogenic Shock Missing (.)	389 (0.3%) 35	146 (0.3%) 17	243 (0.3%) 18
Heart Failure Missing (.)	483 (0.4%) 37	183 (0.4%) 18	300 (0.3%) 19
CVA/Stroke Missing (.)	152 (0.1%) 38	57 (0.1%) 18	95 (0.1%) 20
Other Vascular Complications Requiring Treatment Missing (.)	499 (0.4%) 41	182 (0.4%) 18	317 (0.4%) 23
RBC/Whole Blood Transfusion Missing (.)	1640 (1.2%) 38	656 (1.3%) 17	984 (1.1%) 21

## 6. 2a2.1-2a2.4 Level of Reliability

Reliability of the computed measure score was measured as the ratio of signal to noise. The signal in this case is the proportion of the variability in measured performance that can be explained by real differences in physician performance. Reliability at the level of the specific physician is given by:

Reliability = Variance (physician-to-physician) / [Variance (physician-to-physician) + Variance (physician-specific-error)]

Reliability is the ratio of the physician-to-physician variance divided by the sum of the physician-to-physician variance plus the error variance specific to a physician. A reliability of zero implies that all the variability in a measure is attributable to measurement error. A reliability of one implies that all the variability is attributable to real differences in physician performance.

Reliability testing was performed by using a beta-binomial model. The beta-binomial model assumes the physician performance score is a binomial random variable conditional on the physician's true value that comes from the beta distribution. The beta distribution is usually defined by two parameters, alpha and beta. Alpha and beta can be thought of as intermediate calculations to get to the needed variance estimates.

Reliability is estimated five different points: at the minimum number of quality reporting events for the measure; at the mean number of quality reporting events per physician; and at the 25<sup>th</sup>, 50<sup>th</sup> and 75<sup>th</sup> percentiles of the number of quality reporting events.

Data shown below

Level	2012 Signal-to-Noise Ratio	2011 Signal-to-Noise Ratio
All, >10 Procedures	.873	.889
>Q1	.919	.936
>Q2	.947	.959
>Q3	.968	.974
>Average	.962	.968

For this measure the reliability was very similar for 2011 and 2012. At the minimum number of procedures required (>10) the average reliability was .889 and .873, respectfully for 2011 and 2012. With sites performing at the median number of procedures the reliability was higher at .959 and .947, respectfully.

This measure has moderate reliability when evaluated at the minimum level of quality reporting events and high reliability at the median number of events (50<sup>th</sup> percentile), and at average and greater number of quality events. This suggests that for physicians with an average or greater number of events the measure has high reliability.

## 7. Section 2b3 Exclusions

Because of the required data elements for the non-elective cohort in the AUC there are minimal non-mappable rates. Below is a quarterly breakdown of the 1021423 Non-Elective PCI's. Overall there was a .3% non-mappable rate

Non-Elective AUC										
	Total	timeframecode								P-Value
	n = 1021423	2011Q1 n = 122022	2011Q2 n = 125549	2011Q3 n = 122003	2011Q4 n = 124513	2012Q1 n = 133931	2012Q2 n = 132307	2012Q3 n = 130575	2012Q4 n = 130523	
Not Mappable to AUC	2730 (0.3%)	437 (0.4%)	352 (0.3%)	313 (0.3%)	347 (0.3%)	361 (0.3%)	321 (0.2%)	298 (0.2%)	301 (0.2%)	< 0.001
Continuous variables compared using one-way analysis of variance. Categorical variables compared using chi-square or Fisher's exact test.										

## 8. Section 2b5

### 8.1 2b5.1

There are very few differences by patient characteristics, as they have little to do with having the documentation available to be mapped to the AUC.

### 8.2 2b5.2

A large amount of variability was noted among sites. In 2012 the range was 0-94% with the inter-quartile range being 24% to 48%. This yielded a Median Odds Ratio of 2.09 (2.01, 2.16). The Median Odds Ratio measures the variation between clusters by comparing 2 persons from two randomly chosen different clusters. A MOR of 2.09 indicates a large amount of variation among the clusters\*.

\*Larsen K, Merlo J. Appropriate assessment of neighborhood effects on individual health: integrating random and fixed effects in multilevel logistic regression. Am J Epidemiology. 2005 Jan 1;161(1):81-8. PubMed PMID: 15615918.

## 9. Section 2b7: Missing Data

Missing data is part of our outcome variable, as a large reason for a “not mappable” is missing stress test information. In general CathPCI has very little missing data (I’m sure we can add text to support this)