The New Jersey Cardiac Catheterization Data Registry, Version 2.0

Instructions and Data Specifications

Effective January 1, 2007

Revised: February 23, 2010

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GENERAL INFORMATION

This document contains definitions and specifications for the New Jersey Cardiac Catheterization Data Registry, Version 2.0, and the file layout for electronic data submission. The data elements and definitions are based on the American College of Cardiology National Cardiovascular Data Registry (ACC/NCDR), Version 4.3.

The current version is designed to collect data for outcomes based performance assessment. Moreover, this registry integrates the data collection systems the New Jersey Department of Health and Senior Services issued over the years (Low Risk Diagnostic Catheterization, Full Service Cardiac Catheterization, Primary Angioplasty) into one coherent form that can be used for multiple purposes. By integrating the data collection system, this form is expected to minimize the cost of data collection and the time it takes to learn multiple data systems by hospital staff.

The Office of Health Care Quality Assessment data coordinators are available to assist you with any questions on the data collection form. If you have any questions or comments please contact the Office of Health Care Quality Assessment:

Mailing Address (USPS):

NJ Cardiac Catheterization Data Registry
Office of Health Care Quality Assessment
New Jersey Department of Health and Senior Services
240 West State Street, 11th Floor
PO Box 360
Trenton, NJ 08625-0360

Delivery Services Address (UPS, FedEx, Airborne):

Office of Health Care Quality Assessment
New Jersey Department of Health and Senior Services
240 W State Street, 11th Floor
Trenton, NJ 08608-1002

Telephone Number: (609) 984-7334
Fax Number: (609) 984-7735

DATA SUBMISSION

Starting with the first Quarter, 2007 data submission, all hospitals licensed to perform Low Risk, Full Service, and Primary PCI procedures are required to submit data using this revised form. Data are to be submitted every quarter to the Department within forty five (45) days after the close of the quarter. **Please report data only for patients 16 years or older.** The data submission schedules are as follows:

Quarter	Months Included in Data Submission	Due Date
First	January – March	May 15
Second	April - June	August 15
Third	July - September	November 15
Fourth	October - December	February 15

The data collection form provided in this document is a guide for data entry and is not intended to be completed or submitted with the data file. Data may be collected using any vendor provided program, but must be submitted following the format specified in Appendix C of this manual. Data may be submitted on a 3.5" diskette or on a CD. If you need to compress the data file, you may use the file compression program WINZIP.

The preferred file format is coma delimited text file with text qualifier (“) and should include field names on the first row. Also, cumulative data must be submitted for the calendar year to minimize data handling. For example, the second quarter data submission must also contain first quarter data and the fourth quarter data submission must also contain data from the first three quarters.

Data submission in any other format will not be acceptable.

Please send the data along with the signed data submission form (Appendix E) certifying the accuracy of the data to:

Mailing Address (USPS):

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QUARTERLY ACTIVITY

Following each quarterly submission, the Department will run an error report. This program generates hospital specific reports showing data entry errors. Each hospital will be sent a quarterly report for verification and/or correction. **Hospitals will have five (5) business days to respond to this error report by submitting a corrected file along with a signed letter of certification from the hospital representative responsible for the data submission.** Failure to submit corrected data may result in hospitals not meeting licensure requirements. Quarterly summary tables showing hospital and physician totals will be sent to each hospital for review and verification.

In addition to the quarterly data submission, hospitals will have the opportunity to submit patient deaths to exclude from the cardiac catheterization report. The criteria for exclusion will be provided when it is available.

To submit cases for possible exclusion, the hospital will complete an exclusion request form accompanied with a blinded copy (i.e., hospital, physician and patient identifiers removed) of the medical record documentation of each case submitted for exclusion. The medical record documentation should include the *catheterization report*, *discharge summary and any other medical record that supports the case for exclusion*. This blinded medical record package will be the one reviewed by the Department's Clinical Review Panel. For administrative purposes, the submission should also include a full set of non-blinded documentation for each case.

ANNUAL ACTIVITY

In the Spring of each year, an error report will be generated for the four quarters of data of a calendar year. A copy of the annual error report will be sent to the respective hospitals' data managers for final verification, corrections and certification.

Hospitals will be given thirty (30) days to respond to this mailing. If a hospital's revised data are not received as requested, the Department will assume that there are no corrections to be made to the hospital's data.

In addition, the Department will perform an internal review of the data by matching records from the *cardiac catheterization data* against the *Uniform Billing records* and the State Death Registry file to verify mortality status. If any discrepancies are identified, the Department will contact the hospital(s) for corrections and/or clarifications.

The only corrections accepted after the database closure will be those requested by the Department. Any exceptions to this policy must be submitted in writing to the Director, Office of Health Care Quality Assessment. Accompanying this request should be any medical record documentation (if applicable) which may be reviewed by the Department's Clinical Panel. It is at the Department's discretion to accept or reject any request for a change on records after the database is closed.

AUDIT

The Department will review the annual data submission to ensure that all requested corrections are made. Any requests that are not corrected by the hospital may be selected as part of the medical record audit. The annual data will constitute the sampling frame from which hospital specific samples will be drawn for medical record reviews. Each hospital will be notified of their sampled patient records to help pull documents for the review. A sample data file will be given to a medical records reviewer (auditor) to review the medical records for consistency and accuracy of reporting. The contractor will be designated later by the Department in a competitive bid.

The auditor will provide the hospital a copy of the audit report that it submits to the Department. A hospital will have 30 working days following audit to make any corrections resulting from the audit. If a hospital disagrees with audit findings, it will request a review of the audit findings by the Department within 10 days following the audit. Any request submitted by the hospital should be accompanied with all supporting documents on the patient's medical records along with a summary statement describing why the hospital believes the audit findings are incorrect. The Department will review the request and determine the merits of the request on a case-by-case basis based on the additional information provided. The Department will notify the hospital on its decision regarding the contested cases and may request a revised data submission reflecting the changes.

After the data are updated following the audit, the Department will produce a hospital specific summary frequency table to be reviewed by each hospital. Upon receipt of the final frequency tables, hospitals will have ten (10) working days to review and submit a letter that certifies the accuracy of the data to the Department. If no certification is provided, the Department assumes that the submitted data are correct and will proceed with its analysis.

If funds are not available to audit the data using an independent vendor, the Department will rely on its own internal reviews of the quality of data submitted, and use the data for its quality assessment purposes including for reports on providers and physicians.

THE CARDIAC CATHETERIZATION REPORT

The Department will use the data to produce the Cardiac Catheterization Report in the future. This report will assess their risk-adjusted outcome measures by hospital, cardiologist and for the state. The risk-adjusted outcome estimate is the result of a rigorous statistical model which takes into account risk-factors of patients as well as their socio-demographic characteristics.

Cardiac Catheterization Project	
Quarterly Activity	**Annual Activity**
Quarterly data submission due to the Department 45 days after close of quarter. Run error reports, distribute to hospitals. Hospitals respond within 10 business days to error report. Quarterly summary tables produced.	Run error report, produce frequency tables, verify deaths through data matching. Hospitals have 30 days to respond to error reports and other inconsistencies identified. Database closed for audit/review. Sample selected and/or audit/review conducted. Hospitals have 30 days to submit corrected data based on audit/reviewed findings. Final frequency analysis performed. Hospitals sign off on data. Database is closed for analysis. Cardiac Catheterization Report produced.

DATA DEFINITIONS AND SPECIFICATIONS

A. ADMINISTRATIVE

1. **Facility Code [HOSPNUM]**

Facility Code is a unique number assigned to each facility and includes the three digit hospital code and the division code. If there is no division code, append '0' to the hospital code (see Appendix A for the list of hospitals in NJ).

2. **Facility Name [HOSPNAME]**

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 for a single hospital.

3. **Procedure Type [PROCTYPE]**

Indicate the type of procedure(s) performed on this patient. Please choose one of the following:

1= Diagnostic Cath Only
2= Coronary Intervention Only
3= Diagnostic Cath and Coronary Intervention

B. DEMOGRAPHICS

4. **Last Name [LNAME]**

Indicate the patient's last name.

5. **First Name [FNAME]**

Indicate the patient's first name.

6. **Middle Initial [MI]**

Indicate the patient's middle initial.

7. **Social Security Number [SSNUM]**

Indicate the nine-digit Patient's Social Security Number (SSN). Although this is the Social Security Number in the USA, other countries may have different National Identification Numbers. For example, in Canada, this would be the Social Insurance Number. Please use XXX-XX-XXXX format and define the field as text to ensure leading zeros are not lost.

8. **Medical Record Number [MEDRECNO]**

Indicate the patient's Medical Record Number. Once assigned to a patient, this can never be changed or reassigned to a different patient. If a patient returns to the hospital, he/she MUST receive this same unique patient identifier. Please define the field as text to ensure leading zeros are not lost.

NOTE: If patient has a procedure performed on the same day, append the letter B to the Medical Record Number corresponding to the second procedure.

9. **Date of Birth [DOB]**

Indicate the patient's date of birth. Please use MM/DD/YYYY format.

10. **Gender [SEX]**

Indicate the patient's sex at birth as either male or female. Choose one of the following:

0= Male
1= Female

11. **Race [RACE]**

Indicate the patient's race as determined by the patient/family. Choose one of the following:

1= White
2= Black or African American
3= Asian
4= Native American/Alaska Native
5= Hawaiian/Other Pacific Islander
6= Other

12. **Hispanic or Latino Origin [HISPANIC]**

Indicate the patient's Hispanic or Latino origin as determined by the patient/family. Choose one of the following:

0= No
1= Yes

13. **Patient Zip Code [ZIP]**

Indicate the patient's 5-digit zip code of residence. Please provide in text format to ensure leading zeros are not lost (e.g., 08628).

C. ADMISSION

14. **Admission Date [ADMDATE]**

Indicate the date that the patient was admitted to the hospital for the current stay or had the procedure performed in an outpatient facility. Please use MM/DD/YYYY format.

15. **Admission Status [ADMSTATUS]**

Indicate the admission status prior to documented admission. Choose one of the following:

1= Outpatient Referral: The patient was admitted via referral for the procedure by another doctor and/or clinic.
2= Emergency Department (ED): The patient was admitted via the emergency department.
3= Transfer from Acute Care Facility: The patient was admitted by transfer from another acute care facility.
4= Transfer from Non-Acute Care Facility: The patient was admitted by transfer from a skilled nursing facility, transitional care unit, rehabilitation center, or nursing home.
5= Other: The patient was admitted for anything other than a planned cardiac catheterization or cardiac diagnosis (i.e. MI) that led to a cardiac catheterization.

16. **Inpatient Status [INPATIENT]**

Indicate if the patient is an inpatient. Inpatients are defined as patients staying in a hospital for >= 24 hours. Choose one of the following:

0= No
1= Yes

17. **Insurance Payor [INSURER]**

Indicate the patient's primary health insurer for this admission (see Appendix B). Choose one of the following:

1= Blue Cross/Blue Shield
2= Commercial: Refers to all indemnity (fee-for-service) carriers and Preferred Provider Organizations (PPOs) other than BC/BS.
3= HMO: Refers to a Health Maintenance Organization characterized by coverage that provides health care services for members on a pre-paid basis.
4= Medicaid (including all state/federal Medicaid-type programs)
5= Medicare
6= Self Pay
7= TriCare (CHAMPUS) and the Veteran's Administration Health Plan
8= Uninsured/indigent: Refers to individuals with no or limited health insurance; thus, the individual is the payor regardless of ability to pay.
9= Other: Refers to individuals who reside in and have health insurance in another country.

ADMISSION/LAB MEDICATIONS

18. **Aspirin [AMEDASP]**

Indicate if aspirin was administered up to and including all cath lab visits. Choose one of the following:

0= No
1= Yes

19. **Beta Blocker [AMEDBB]**

Indicate if beta blockers were administered up to and including all cath lab visits. Choose one of the following:

0= No
1= Yes

20. **Coumadin [AMEDCOU]**

Indicate if coumadin was administered up to and including all cath lab visits. Choose one of the following:

0= No
1= Yes

21. **Glycoprotein IIBIIA Inhibitors [AMEDGLY]**

Indicate if glycoprotein IIBIIA inhibitors were administered up to and including all cath lab visits. Choose one of the following:

0= No
1= Yes

22. **Heparin Low Molecular Weight [AMEDHLMW]**

Indicate if heparin low molecular weight was administered up to and including all cath lab visits. Choose one of the following:

0= No
1= Yes

23. **Heparin Unfractionated [AMEDHU]**

Indicate if heparin unfractionated was administered up to and including all cath lab visits. Choose one of the following:

0= No
1= Yes

24. **ACEI/ARB [AMEDACEI]**

Indicate if ACEI/ARB were administered up to and including all cath lab visits. Choose one of the following:

0= No
1= Yes

25. **Platelet Agg Inhibitors [AMEDPAI]**

Indicate if platelet agg inhibitors were administered up to and including all cath lab visits. Choose one of the following:

0= No
1= Yes

26. **Renal Adjuvant Therapy [AMEDRAT]**

Indicate if renal adjuvant therapy was administered up to and including all cath lab visits. Choose one of the following:

0= No
1= Yes

27. **Lipid Lowering Agents [AMEDLLA]**

Indicate if lipid lowering agents were administered up to and including all cath lab visits. Choose one of the following:

0= No
1= Yes

28. **Thrombin Inhibitors [AMEDTI]**

Indicate if thrombin inhibitors were administered up to and including all cath lab visits. Choose one of the following:

0= No
1= Yes

29. **Thrombolytics [AMEDTHRO]**

Indicate if thrombolytics were administered up to and including all cath lab visits. Choose one of the following:

0= No
1= Yes

30. **Other [AMEDOTH]**

Indicate if a medication other than one that falls into the above categories was administered up to and including all cath lab visits. Choose one of the following:

0= No
1= Yes

NOTE: This field includes medications administered in the hospital up to the time the catheterization procedure is performed. For outpatients, it includes medications the patient is taking at home, even if they did not take them that day due to the catheterization. Only include medications that may impact catheterization outcome.

31. **If "Yes" to Number 30, Specify Other Medication [AMEDSPEC]**

If the patient is administered a medication that does not fall into any one of the above categories, please specify. Only list the most significant drug if more than one. (Leave blank if the answer to number 30 is "No".)

Medication Name: _____ (up to 20 characters)

D. HISTORY AND RISK FACTORS

32. **Height [HT]**

Indicate the patient's height in centimeters.

____ cm

33. **Weight [WT]**

Indicate the patient's weight in kilograms.

____ kg

34. **Previous MI (>7 Days) [PRIORMI]**

Indicate if the patient has had at least one documented previous MI (STEMI or NSTEMI) **EIGHT or more days** prior to this admission. This can be coded based on physician documentation or history noted in the medical record. Choose one of the following:

0= No
1= Yes

Notes:

A. NON ST ELEVATION MYOCARDIAL INFARCTION (NSTEMI)
The patient was hospitalized for a myocardial infarction documented in the medical record.

AT LEAST ONE OF THE FOLLOWING BIOCHEMICAL INDICATORS for detecting myocardial necrosis must be present (see below for a definition of Reference Control Limits):

1) Troponin T or I:
   a) Maximal concentration of troponin T or I > the MI decision limit on at least one occasion during the first 24 hours after the index clinical event.
2) CK-MB:
   a) Maximal value of CK-MB > 2 x the upper limit of normal on one occasion during the first hours after the index clinical event. OR
   b) Maximal value of CK-MB, preferable CK-MB mass, > upper limit of normal on two successive samples.
3) Total CK:
   a) In the absence of availability of a troponin or CK-MB assay, total CK > 2 x the upper limit of normal, or the B fraction of CK may be employed, but these last two biomarkers are considerably less satisfactory than CK-MB.

AND ONE OF THE FOLLOWING:

1) Either ST segment depression or T wave abnormalities; or
2) Ischemic symptoms in the presence or absence of chest discomfort. Ischemic symptoms may include:
   a) unexplained nausea and vomiting; or
   b) persistent shortness of breath secondary to left ventricular failure; or
   c) unexplained weakness, dizziness, lightheadedness, or syncope.

B. ST ELEVATION MYOCARDIAL INFARCTION (STEMI)
Indicate whether the patient was hospitalized for an ST Elevation Myocardial Infarction (STEMI) documented in the medical record.

AT LEAST ONE OF THE FOLLOWING BIOCHEMICAL INDICATORS for detecting myocardial necrosis must be present (see below for a definition of Reference Control Limits):

1) Troponin T or I:
   a) Maximal concentration of troponin T or I > the MI decision limit on at least one occasion during the first 24 hours after the index clinical event.
2) CK-MB:
   a) Maximal value of CK-MB > 2 x the upper limit of normal on one occasion during the first hours after the index clinical event; OR
   b) Maximal value of CK-MB, preferable CK-MB mass, > upper limit of normal on two successive samples.

3) Total CK
   a) In the absence of availability of a troponin or CK-MB assay, total CK > 2 x the upper limit of normal, or the B fraction of CK may be employed, but these last two biomarkers are considerably less satisfactory than CK-MB.

AND ONE OF THE FOLLOWING ECG CHANGES:

1) ST-segment elevation: New or presumed new ST segment elevation at the J point in two or more continguous leads with the cut-off points >=0.2 mV in leads V1, V2, or V3, or >=0.1 mV in other leads; OR
2) Development of any Q wave in leads V1 through V3, or the development of a Q-wave > or = to 30 ms (0.03s) in leads I, II, aVL, aVF, V4, V5, or V6. (Q wave changes must be present in any two continguous leads, and be > or = to 1mm in depth.)

Defining Reference Control Values (MI Diagnostic Limit and Upper Limit of Normal):

Reference values must be determined in each laboratory by studies using specific assays with appropriate quality control, as reported in peer-reviewed journals. Acceptable imprecision (coefficient of variation) at the 99th percentile for each assay should be defined as < or = to 10%. Each individual laboratory should confirm the range of reference values in their specific setting.

35. **Congestive Heart Failure (Previous History) [PRIORCHF]**

Indicate if the patient has a history of congestive heart failure (CHF) documented in the medical record. History is defined as **any time prior to two weeks before the current date of admission**. Besides physician documentation of the CHF history, CHF can also be defined by one of the following:

1. Paroxysmal nocturnal dyspnea (PND);
2. Dyspnea on exertion (DOE) due to heart failure; or
3. Chest X-Ray (CXR) showing pulmonary congestion.
4. Pedal edema or dyspnea treated with medical therapy for heart failure.

Choose one of the following:

0= No
1= Yes

36. **Most Recent Ejection Fraction [EJPCT1]**

Enter the percentage of the blood emptied from the ventricle at the end of the contraction. Use the most recent determination during or prior to intervention. Ejection Fraction should have been measured within the last three (3) to six (6) months. **Leave blank if no ejection fraction was done.**

_____ (Enter 1 – 99%)

37. **Ejection Fraction Method [EJMETHOD]**

Indicate the method used to obtain Ejection Fraction. Choose one of the following:

0= Not Done
1= Left Ventriculogram (LVG)
2= Radionuclide
3= Echocardiogram (Echo)
4= Estimate

38. **Diabetes [DIABETES]**

Indicate if the patient has a history of diabetes, regardless of duration of disease, or need for antidiabetic agents. This includes diagnosis on admission or pre-procedure. It does not include gestational diabetes. Choose one of the following:

0= No
1= Yes

39. **Diabetes Control [DIABCONT]**

Enter the control method the patient presented with at admission. Patients placed on a pre-procedure diabetic pathway of insulin drip but at admission were controlled with diet or oral methods are not coded as insulin dependent. Choose one of the following:

0= None: No treatment for diabetes
1= Diet: Diet treatment only
2= Oral: Oral agent treatment (includes oral agent with/without diet treatment)
3= Insulin: Insulin treatment (includes any combination with insulin)

40. **Renal Failure (Previous History) [RENAL]**

Indicate if the patient has a documented history of renal (kidney) failure or indicate if the patient has a history of a creatinine > 2.0 mg/dl.
Note: Renal transplant patients are considered to have renal failure if their creatinine level has exceeded 2.0mg/dl since the transplant. Choose one of the following:

0= No
1= Yes

41. **Renal Failure – Dialysis [DIALYSIS]**

Indicate if the patient is currently undergoing dialysis as a result of his/her renal failure. Choose one of the following:

0= No
1= Yes

42. **Cerebrovascular Disease [CVD]**

Indicate if the patient has a history of cerebrovascular disease, documented by any one of the following:

1. Unresponsive Coma greater than 24 hours: Patient experienced complete mental unresponsiveness and no evidence of psychological or physiologically appropriate responses to stimulation.
2. Cerebrovascular Accident (CVA): Patient has a history of stroke, i.e., loss of neurological function with residual symptoms at least 24 hours after onset.
3. Reversible Ischemic Neurologic Deficit (RIND): Patient has a history of loss of neurological function with symptoms at least 24 hours after onset but with complete return of function within 72 hours.
4. 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 hours.
5. Non-invasive/invasive carotid test with greater than 79% occlusion.
6. Previous carotid artery surgery.

This does not include neurological disease processes such as metabolic and/or anoxic ischemic encephalopathy. Choose one of the following:

0= No
1= Yes

43. **Cerebrovascular Accident [CVA]**

Indicate if the patient has a history of stroke, i.e., loss of neurological function with residual symptoms at least 24 hours after onset. Choose one of the following:

0= No
1= Yes

44. **Cerebrovascular Accident When [CVAWHEN]**

Indicate if the patient has a history of stroke, i.e., loss of neurological function with residual symptoms at least 72 hours after onset in the last 2 weeks or over 2 weeks ago. Choose one of the following:

1= Recent (≤ 2 weeks ago)
2= Remote (> 2 weeks ago)

45. **Peripheral Vascular Disease [PVD]**

Indicate if the patient has a history of peripheral vascular disease. This can include:

1. Claudication either with exertion or at rest.
2. Amputation for arterial vascular insufficiency.
3. Aorto-iliac occlusive disease reconstruction, peripheral vascular bypass surgery, angioplasty or stent; or percutaneous intervention to the extremities.
4. Documented AAA repair or stent.
5. Positive non-invasive/invasive test.

This does not include procedures such as vein stripping, carotid disease, or procedures originating above the diaphragm. Choose one of the following:

0= No
1= Yes

46. **Chronic Lung Disease [LUNGDIS]**

Indicate if the patient has a documented history of chronic lung disease (i.e. chronic obstructive pulmonary disease, emphysema, bronchitis), or has been or is currently treated with pharmacologic therapy. Choose one of the following:

0= No
1= Yes

47. **Dyslipidemia [DYSLIPID]**

Indicate if the patient has a history of dyslipidemia diagnosed and/or treated by a physician. Criteria can include documentation of:

1. Total cholesterol greater than 200 mg/dl, or
2. LDL greater than or equal to 130 mg/dl, or
3. HDL less than 40 mg/dl, or
4. Admission cholesterol greater than 200 mg/dl, or
5. Triglycerides greater than 150 mg/dl.

Note: If treatment was initiated because the LDL was >100 mg/dl (2.59 mmole/l) in patients with known coronary artery disease, this would qualify as a "yes". Choose one of the following:

0= No
1= Yes

48. **Hypertension [HYPERTEN]**

Indicate if the patient has hypertension as documented by one of the following:

1. History of hypertension diagnosed and treated with medication, diet and/or exercise.
2. Blood pressure greater than 130 systolic or 80 diastolic on at least 2 occasions.
3. Currently on antihypertensive pharmacologic therapy.

Choose one of the following:

0= No
1= Yes

49. **History of Tobacco Use [SMOKER]**

Indicate if the patient has a history confirming any form of tobacco use in the past. This includes cigarettes, cigar, chewing tobacco, etc. Choose one of the following:

0= Never
1= Current: Use of tobacco within one month of this admission.
2= Former: Use of tobacco over one month prior to this admission.

50. **Previous Diagnostic Catheterization [PRIORDIAG]**

Indicate if the patient had a previous diagnostic catheterization (even if unsuccessful) of any type performed prior to the current admission. Choose one of the following:

0= No
1= Yes

51 **Previous PCI [PRIORPCI]**

Indicate if the patient had a previous percutaneous coronary intervention (even if unsuccessful) of any type (balloon angioplasty, stent or other), performed prior to the current admission. Choose one of the following:

0= No
1= Yes

52. **Previous PCI – Date [PCIDATE]**

If the patient had a previous PCI of any type (balloon angioplasty, stent or other), performed prior to the current admission, indicate the date of the most recent PCI. If month or day is unknown enter 01.

_ _ /_ _/_ _ _ _ (MM/DD/YYYY)

53. **Previous CABG [PRIORCABG]**

Indicate if the patient had a previous Coronary Bypass Graft Surgery by any approach. Choose one of the following:

0= No
1= Yes

54. **Previous CABG – Date [CABGDATE1]**

If the patient had a previous CABG prior to the current admission, indicate the date of the most recent CABG. If month or day is unknown enter 01.

_ _ /_ _/_ _ _ _ (MM/DD/YYYY)

55. **Previous Valvular Surgery [PRIORVALVE]**

Indicate if the patient had a previous surgical replacement and/or repair of a cardiac valve, by any approach prior to the current admission. Choose one of the following:

0= No
1= Yes

56. **Previous Cardiac Transplant [PRIORTRANS]**

Indicate if the patient had previous cardiac transplant surgery. Choose one of the following:

0= No
1= Yes

E. CURRENT CLINICAL STATUS

57. **CHF (Current Status) [CURRENTCHF]**

Indicate whether, within 2 weeks prior to the first procedure, a physician has diagnosed that the patient is currently in congestive heart failure (CHF).
CHF can be diagnosed based on careful history and physical exam, or by one of the following criteria:

1. Paroxysmal nocturnal dyspnea (PND) and/or fatigue.
2. Dyspnea on exertion (DOE) due to heart failure.
3. Chest X-Ray (CXR) showing pulmonary congestion.
4. Pedal edema or dyspnea treated with medical therapy for heart failure.

Choose one of the following:

0= No
1= Yes

58. **NYHA [NYHA]**

Indicate the patient's New York Heart Association (NYHA) **classification within the past 2 weeks**. Choose one of the following:

1= 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.
2= 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).

3= 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.
4= Class IV: Patient has dyspnea at rest that increases 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.

NOTE: For patients with no symptoms, code "Class I".

59. **Cardiogenic Shock [CARDIOGEN] within 24 hours**

Indicate if the patient is in a clinical state of hypoperfusion on admission, according to either of the following criteria:

1. Systolic BP < 90 and/or Cardiac Index < 2.2 **for greater than 30 minutes** despite maximal treatment;
2. IV inotropes and/or IABP necessary to maintain Systolic BP > 80 and/or CI > 1.8.

Choose one of the following:

0= No
1= Yes

60. **Hemodynamically Stable [HEMOSTAB]**

Indicate if the patient is hemodynamically stable at the time of admission. Choose one of the following:

0= No
1= Yes

61. **Hypotension [HYPOTEN]**

Indicate if the patient has hypotension at the time of admission. Choose one of the following:

0= No
1= Yes

62. **Last Creatinine [CREATININE]**

Indicate the last creatinine level prior to the procedure. If more than one level is available, code the latest level.

____ mg/dL

63. **Non-Invasive Test – Outcome [NONINVOUT]**

Indicate if a non-invasive test was performed to rule-out ischemia that demonstrated a deficiency of blood supply to the heart muscle due to obstruction or constriction of the coronary arteries. The test could be performed on admission (prior to the procedure), or it could be a test performed that resulted in the admission. Non-Invasive tests include ECG, exercise or pharmacologic stress tests, radionucleotide, echo, CT scans and other heart scans. Choose one of the following:

0= None (No non-invasive test performed)
1= Positive
2= Negative
3= Equivocal

64. **Ventilator Support [VENTSUP1]**

Indicate if the patient is currently on ventilator support. Choose one of the following:

0= No
1= Yes

65. **Defibrillation [DEFIB1]**

Indicate if the patient was defibrillated at the time of admission or prior to the Cath Lab visit. Defibrillation is a process in which an electronic device gives an electric shock to the heart. This helps re-establish normal contraction rhythms in a heart having dangerous arrhythmia or in cardiac arrest. Choose one of the following:

0= No
1= Yes

66. **Admission Symptom Presentation [ADMSX]**

Indicate the patient's symptom presentation or angina type at admission. Choose one of the following:

0= No Symptoms or Angina.
1= Atypical Chest Pain: 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.
2= Stable Angina: Angina without a change in frequency or pattern for the six weeks prior to this cath lab visit. Angina is controlled by restand/or oral or transcutaneous medications.
3= Acute Coronary Syndrome (ACS): Unstable Angina.
4= Acute Coronary Syndrome (ACS): Non-ST Elevation MI (Non-STEMI)
5= Acute Coronary Syndrome (ACS): ST Elevation MI (STEMI).

Notes:

UNSTABLE ANGINA is defined as:

The patient was hospitalized for unstable angina documented in the medical record with serial ECG's and biochemical profiles. One of the following criteria is necessary:

1. Angina at rest (usually prolonged >20 minutes).
2. New onset angina (<2 months) exertional angina of at least Canadian Cardiovascular Society Classification (CCSC) Class III.
3. *New per guidelines* Increasing angina - previously diagnosed angina that has become distinctly more frequent, longer in duration, or lower in threshold (i.e., increased by greater than or equal to 1 CCS class to at least CCS Class III severity).

NON ST ELEVATION MYOCARDIAL INFARCTION (Non-STEMI) is defined as:
The patient was hospitalized for a myocardial infarction documented in the medical record.

AT LEAST ONE OF THE FOLLOWING BIOCHEMICAL INDICATORS for detecting myocardial necrosis must be present (see below for a definition of Reference Control Limits):

1) Troponin T or I:
   a) Maximal concentration of troponin T or I > the MI decision limit on at least one occasion during the first 24 hours after the index clinical event.
2) CK-MB:
   a) Maximal value of CK-MB > 2 x the upper limit of normal on one occasion during the first hours after the index clinical event. OR
   b) Maximal value of CK-MB, preferable CK-MB mass, > upper limit of normal on two successive samples.
3) Total CK:
   a) In the absence of availability of a troponin or CK-MB assay, total CK > 2 x the upper limit of normal, or the B fraction of CK may be employed, but these last two biomarkers are considerably less satisfactory than CK-MB.

AND ONE OF THE FOLLOWING:

1) Either ST segment depression or T wave abnormalities; or
2) Ischemic symptoms in the presence or absence of chest discomfort. Ischemic symptoms may include:
   a) unexplained nausea and vomiting; or
   b) persistent shortness of breath secondary to left ventricular failure; or
   c) unexplained weakness, dizziness, lightheadedness, or syncope.

ST ELEVATION MYOCARDIAL INFARCTION (STEMI):
Indicate whether the patient was hospitalized for an ST Elevation Myocardial Infarction (STEMI) documented in the medical record.

AT LEAST ONE OF THE FOLLOWING BIOCHEMICAL INDICATORS for detecting myocardial necrosis must be present (see below for a definition of Reference Control Limits):

1) Troponin T or I:
   a) Maximal concentration of troponin T or I > the MI decision limit on at least one occasion during the first 24 hours after the index clinical event.
2) CK-MB:
   a) Maximal value of CK-MB > 2 x the upper limit of normal on one occasion during the first hours after the index clinical event; OR
   b) Maximal value of CK-MB, preferable CK-MB mass, > upper limit of normal on two successive samples.
3) Total CK
   a) In the absence of availability of a troponin or CK-MB assay, total CK > 2 x the upper limit of normal, or the B fraction of CK may be employed, but these last two biomarkers are considerably less satisfactory than CK-MB.

AND ONE OF THE FOLLOWING ECG CHANGES:

1) ST-segment elevation: New or presumed new ST segment elevation at the J point in two or more continguous leads with the cut-off points >=0.2 mV in leads V1, V2, or V3, or >=0.1 mV in other leads; OR
2) Development of any Q wave in leads V1 through V3, or the development of a Q-wave > or = to 30 ms (0.03s) in leads I, II, aVL, aVF, V4, V5, or V6. (Q wave changes must be present in any two continguous leads, and be > or = to 1mm in depth.)

Defining Reference Control Values (MI Diagnostic Limit and Upper Limit of Normal):

Reference values must be determined in each laboratory by studies using specific assays with appropriate quality control, as reported in peer-reviewed journals. Acceptable imprecision (coefficient of variation) at the 99th percentile for each assay should be defined as < or = to 10%. Each individual laboratory should confirm the range of reference values in their specific setting.

67. **Time Period: Sx Onset to Admission [TIMESX]**

Indicate the time from the documented onset of **any symptoms of MI** (including all symptoms except 'No SX/No Angina') to the time of admission to your facility. Choose one of the following:

1= Less than or equal to 6 hours
2= Greater than 6 hours and less than or equal to 12 hours
3= Greater than 12 hours and less than or equal to 24 hours
4= Greater than 24 hours and less than or equal to 48 hours
5= Greater than 48 hours and less than or equal to 72 hours
6= Greater than 72 hours and less than or equal to 7 days
7= No time period noted. Patient presented as a silent MI

NOTE: If symptoms are greater than 7 days, enter "6".

F. CATH LAB VISIT

68. **Date of Procedure [PROCDATE]**

Indicate the date the procedure(s) was initiated.

_ _ /_ _/_ _ _ _ (MM/DD/YYYY)

69. **Right Heart Cath Procedure [RHC]**

Indicate if a patient had a Right Heart Cath Procedure. A Right Heart Cath is defined as the passage of a catheter through the right atrium and ventricle to the pulmonary artery or wedge position for diagnostic purposes. Choose one of the following:

0= No
1= Yes

70. **Left Heart Cath Procedure [LHC]**

Indicate if the patient had a Left Heart Cath Procedure. A Left Heart Cath is defined as the passage of a catheter into the left ventricle for pressure measurements or ventriculography, or into the aortic root for coronary arteriography. Choose one of the following:

0= No
1= Yes

71. **Coronary Angiography [CORANG]**

Indicate if the patient had a coronary angiography. Choose one of the following:

0= No
1= Yes

72. **Ventricular Angiography [VENTANG]**

Indicate if the patient had a ventricular angiography. Choose one of the following:

0= No
1= Yes

73. **Other Angiography [OTHANG]**

Indicate if the patient had an angiography of a cardiac structure such as bypass graft angiography, pulmonary angiogram, or ascending aortic angiography. Choose one of the following:

0= No
1= Yes

74. **PCI Procedure [PCI]**

Indicate if the patient had a percutaneous coronary intervention (PCI) procedure during the cath lab visit. A PCI is defined as any coronary device attempting to cross one or more coronary lesions. Choose one of the following:

0= No
1= Yes

75. **Fluoro Time [FLUORO]**

Indicate the total fluoroscopy time recorded during the cath lab visit to the nearest 0.1 minute. The time recorded should include the total time for the lab visit.

____ (nearest 0.1 minute)

HEMODYNAMIC SUPPORT

76. **IABP [IABP]**

Indicate if an Intra-aortic Balloon Pump (IABP) was inserted prior, during or after the Cath lab visit. Choose one of the following:

0= No
1= Yes

77. **IABP PLACEMENT Timing [IABPTIME]**

Indicate when the Intra-aortic Balloon Pump (IABP) was inserted. Choose one of the following:

1= Before Lab Visit
2= During Lab Visit
3= After Lab Visit

78. **Vasopressors/Inotropes [VASOPRESS]**

Indicate when vasopressors/inotropes were used on this patient. Vasopressors and Inotropes are a group of drugs used for resuscitation of seriously ill patients, and for the treatment of hypotension in a cath lab.

0= None
1= Before Lab Visit
2= During Lab Visit
3= After Lab Visit

79. **Other Clinical Support [OTHSUP]**

Indicate if a clinical support that assists hemodynamics other than the ones previously listed was used during the cath lab visit. Examples include temporary pacemakers, cardiopulmonary support (CPS) and Tandem heart. Choose one of the following:

0= No
1= Yes

LV STATUS

80. **Left Ventricular Function Assessed [LVASSESS]**

Indicate whether the patient had the left ventricular function assessed before or during the cath lab visit via invasive (i.e. LV gram) or non-invasive testing (i.e. Echo, Nuclear Medicine). Choose one of the following:

0= No
1= Yes

81. **Left Ventricular Wall Motion [LVWALL]**

If left ventricular non-invasive or invasive testing were documented and completed before or during the cath lab visit indicate whether ANY wall motion was normal or abnormal. Choose one of the following:

0= Normal
1= Abnormal

Note: A hyperdynamic left ventricle is not considered abnormal.

82. **Ejection Fraction Percentage [EJPCT2]**

The percentage of the blood emptied from the ventricle at the end of the contraction. Use the percentage obtained during the intervention. **Leave blank if no ejection fraction was done.**

_____ (Enter 1 – 99%)

83 **Ventilator Support [VENTSUP2]**

Indicate if the patient was on ventilator support in the cath lab. Choose one of the following:

0= No
1= Yes

84. **Defibrillation [DEFIB2]**

Indicate if the patient had to be cardioverted or defibrillated in the cath lab. Defibrillation is a process in which an electronic device gives an electric shock to the heart. This helps re-establish normal contraction rhythms in a heart having dangerous arrhythmia or in cardiac arrest. In recent years small portable defibrillators have become available. These are called automated external defibrillators or AEDs. Choose one of the following:

0= No
1= Yes

G. DIAGNOSTIC CATH PROCEDURE

Skip this section if no diagnostic cath is performed on the patient.

85. **Diagnostic Catheterization Operator's License Number [DLICNUM]**

Indicate the physician's license number. Do not include the leading “25” (before MA or MB). For example, license number 25MA01234500 should be entered as MA01234500.

86. **Diagnostic Catheterization Operator's Last Name [DLNAME]**

Indicate the Catheterization Operator’s last name.

87. **Diagnostic Catheterization Operator's First Name [DFNAME]**

Indicate the Catheterization Operator’s first name.

88. **Cardiac Cath Status [CATHSTAT]**

Indicate the status of the Cardiac Cath. Choose one of the following:

1= Elective: The patient's cardiac function has been stable in the days or weeks prior to the procedure. The procedure could be deferred without increased risk of compromised cardiac outcome.
2= Urgent: ALL of the following conditions are met:
   a. Not elective status.
   b. Not emergency status.
   c. Procedure required during same hospitalization in order to minimize chance of further clinical deterioration.
   d. Worsening, sudden chest pain, CHF, acute myocardial infarction (AMI), anatomy, IABP, unstable angina (USA) with intravenous (IV) nitroglycerin (TNG) or rest angina (but stabilized patient) may be included.
3= Emergency: 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 and/or IABP));
      (2) Acute Evolving Myocardial Infarction within 24 hours before Cardiac Cath Lab Procedure; or
      (3) pulmonary edema requiring intubation.
   b. Mechanical dysfunction (either of the following):
      (1) shock with circulatory support; or
      (2) shock without circulatory support.

DIAGNOSTIC CATHETERIZATION INDICATIONS

89. **Valvular Heart Disease [VALVDIS]**

Indicate if the patient has history, physical findings, or noninvasive evidence of any valvular heart disease requiring evaluation by diagnostic catheterization. Choose one of the following:

0= No
1= Yes

90. **Arrhythmia [ARRHYT]**

Indicate if the patient has at least one of the following arrhythmia's, which required diagnostic catheterization to define the anatomic and hemodynamic substrate:

1. Sustained Ventricular Tachycardia or Ventricular Fibrillation;
2. Heart Block;
3. Atrial Fibrillation or Atrial Flutter

These arrhythmias may have been treated with any of the following treatment modalities:

1. Ablation
2. AICD
3. Pacemaker
4. Pharmacological Treatment, or
5. Cardioversion

Choose one of the following:

0= No
1= Yes

91. **Other Cardiac Indications [OTHIND]**

Indicate if the patient is having the diagnostic cath for one of the following reasons:

0= None
1= Congenital Heart Disease
2= Heart Failure
3= Cardiomyopathy
4= Cardiomyopathy/Heart Failure
5= Other

92. **Left Main Stenosis Percent [LMPCT]**

Indicate the % of most severe stenosis assessed, for the Left Main coronary artery. This does not include collaterals. If there is no stenosis then enter 0%. If the patient only has a PCI (without a diagnostic cath at the same sitting), it is acceptable to use prior and RECENT cath lab visit information, even if at another institution. Leave blank if not assessed.

____ (Enter 0-100%)

STENOSIS: Stenosis represents the percentage diameter reduction, from 0 to 100, associated with the identified vessel systems. 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 percentage stenosis noted. The LM, LAD, RCA/PDA, CIRC and Ramus are the systems of interest and should include major branch vessels of >= 2.0 mm in diameter.

93. **Proximal LAD Stenosis Percent [PROXPCT]**

Indicate the % of most severe stenosis assessed, in the Proximal Left Anterior Descending coronary artery. This does not include collateral circulation. If there is no stenosis then enter 0%. If the patient only has a PCI (without a diagnostic cath at the same sitting), it is acceptable to use prior and RECENT cath lab visit information, even if at another institution. Leave blank if not assessed.

____ (Enter 0-100%)

STENOSIS: Stenosis represents the percentage diameter reduction, from 0 to 100, associated with the identified vessel systems. 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 percentage stenosis noted. The LM, LAD, RCA/PDA, CIRC and Ramus are the systems of interest and should include major branch vessels of >= 2.0 mm in diameter.

94. **Mid/Distal LAD Stenosis Percent [MIDDISPCT]**

Indicate the % of most severe stenosis assessed, in the Mid/Distal Left Anterior Descending coronary artery. This does not include collateral circulation. If there is no stenosis then enter 0%. If the patient only has a PCI (without a diagnostic cath at the same sitting), it is acceptable to use prior and RECENT cath lab visit information, even if at another institution. Leave blank if not assessed.

____ (Enter 0-100%)

STENOSIS: Stenosis represents the percentage diameter reduction, from 0 to 100, associated with the identified vessel systems. 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 percentage stenosis noted. The LM, LAD, RCA/PDA, CIRC and Ramus are the systems of interest and should include major branch vessels of >= 2.0 mm in diameter.

95. **CIRC Stenosis Percent [CIRCPCT]**

Indicate the % of most severe stenosis assessed, in the Circumflex coronary artery. This does not include collaterals. If there is no stenosis then enter 0%. If the patient only has a PCI (without a diagnostic cath at the same sitting), it is acceptable to use prior and RECENT cath lab visit information, even if at another institution. Leave blank if not assessed.

____ (Enter 0-100%)

STENOSIS: Stenosis represents the percentage diameter reduction, from 0 to 100, associated with the identified vessel systems. 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 percentage stenosis noted. The LM, LAD, RCA/PDA, CIRC and Ramus are the systems of interest and should include major branch vessels of >= 2.0 mm in diameter.

96. **RCA Stenosis Percent [RCAPCT]**

Indicate the % of most severe stenosis assessed, in the Right coronary artery. This does not include collaterals. If there is no stenosis then enter 0%. If the patient only has a PCI (without a diagnostic cath at the same sitting), it is acceptable to use prior and RECENT cath lab visit information, even if at another institution. Leave blank if not assessed.

____ (Enter 0-100%)

STENOSIS: Stenosis represents the percentage diameter reduction, from 0 to 100, associated with the identified vessel systems. 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 percentage stenosis noted. The LM, LAD, RCA/PDA, CIRC and Ramus are the systems of interest and should include major branch vessels of >= 2.0 mm in diameter.

97. **Ramus Stenosis Percent [RAMPCT**

Indicate the % of most severe stenosis assessed, in the Ramus Artery. This does not include collaterals. If no stenosis then enter 0%. If the patient only has a PCI (without a diagnostic cath at the same sitting), it is acceptable to use prior and RECENT cath lab visit information, even if at another institution. Leave blank if not assessed.

____ (Enter 0-100%)

STENOSIS: Stenosis represents the percentage diameter reduction, from 0 to 100, associated with the identified vessel systems. 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 percentage stenosis noted. The LM, LAD, RCA/PDA, CIRC and Ramus are the systems of interest and should include major branch vessels of >=2.0 mm in diameter.

98. **Proximal LAD Graft Stenosis Percent [PROXGPCT]**

Indicate the % of most severe stenosis assessed in the graft to the Proximal Left Anterior Descending coronary artery. If there is no stenosis then enter 0%. If the patient only has a PCI (without a diagnostic cath at the same sitting), it is acceptable to use prior and RECENT cath lab visit information, even if at another institution. Leave blank if not assessed.

____ (Enter 0-100%)

STENOSIS: Stenosis represents the percentage diameter reduction, from 0 to 100, associated with the identified vessel systems. 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 percentage stenosis noted. The LM, LAD, RCA/PDA, CIRC and Ramus are the systems of interest and should include major branch vessels of >= 2.0 mm in diameter.

99. **Mid/Distal LAD Graft Stenosis Percent [MIDDISGPCT]**

Indicate the % of most severe stenosis assessed in the graft to the Mid/Distal Left Anterior Descending coronary artery. If there is no stenosis then enter 0%. If the patient only has a PCI (without a diagnostic cath at the same sitting), it is acceptable to use prior and RECENT cath lab visit information, even if at another institution. Leave blank if not assessed.

____ (Enter 0-100%)

STENOSIS: Stenosis represents the percentage diameter reduction, from 0 to 100, associated with the identified vessel systems. 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 percentage stenosis noted. The LM, LAD, RCA/PDA, CIRC and Ramus are the systems of interest and should include major branch vessels of >= 2.0 mm in diameter.

100. **CIRC Graft Stenosis Percent [CIRCGPCT]**

Indicate the % of most severe stenosis assessed in the graft to the Circumflex coronary artery. If there is no stenosis then enter 0%. If the patient only has a PCI (without a diagnostic cath at the same sitting), it is acceptable to use prior and RECENT cath lab visit information, even if at another institution. Leave blank if not assessed.

____ (Enter 0-100%)

STENOSIS: Stenosis represents the percentage diameter reduction, from 0 to 100, associated with the identified vessel systems. 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 percentage stenosis noted. The LM, LAD, RCA/PDA, CIRC and Ramus are the systems of interest and should include major branch vessels of >= 2.0 mm in diameter.

101. **RCA Graft Stenosis Percent [RCAGPCT]**

Indicate the % of most severe stenosis assessed in the graft to the Right coronary artery. If there is no stenosis then enter 0%. If the patient only has a PCI (without a diagnostic cath at the same sitting), it is acceptable to use prior and RECENT cath lab visit information, even if at another institution. Leave blank if not assessed.

____ (Enter 0-100%)

STENOSIS: Stenosis represents the percentage diameter reduction, from 0 to 100, associated with the identified vessel systems. 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 percentage stenosis noted. The LM, LAD, RCA/PDA, CIRC and Ramus are the systems of interest and should include major branch vessels of >= 2.0 mm in diameter.

102. **Ramus Graft Stenosis Percent [RAMGPCT]**

Indicate the % of most severe stenosis assessed in the graft to the Ramus coronary artery. If there is no stenosis then enter 0%. If the patient only has a PCI (without a diagnostic cath at the same sitting), it is acceptable to use prior and RECENT cath lab visit information, even if at another institution. Leave blank if not assessed.

____ (Enter 0-100%)

STENOSIS: Stenosis represents the percentage diameter reduction, from 0 to 100, associated with the identified vessel systems. 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 percentage stenosis noted. The LM, LAD, RCA/PDA, CIRC and Ramus are the systems of interest and should include major branch vessels of >= 2.0 mm in diameter.

103. **Mitral Insufficiency [MVALVINSUF]**

Indicate the grade of mitral insufficiency. Choose one of the following:

0= None
1= Grade 1 - Trivial
2= Grade 2 - Mild
3= Grade 3 - Moderate
4= Grade 4 - Severe
5= Not Assessed

104. **Aortic Stenosis [AVALVSTEN]**

Indicate whether there is documented evidence of aortic stenosis. Choose one of the following:

0= None
1= Yes, Aortic Stenosis
2= Not Assessed

105. **Calculated Valve Area [VALVAREA]**

If aortic valve disease is present, indicate the calculated valve area in square centimeters. Leave blank if not applicable.

____ sq cm

106. **Doppler Mean Gradient [DOPPMG]**

Indicate the Doppler Mean Gradient in mmHg if there is Aortic Stenosis is assessed. The Doppler Mean Gradient is the mean gradient derived from planimetry of the continuous wave doppler spectral velocity recording across the aortic valve in the case of aortic stenosis or the mitral valve in the case of mitral stenosis.

A software program in all echodoppler machines performs an integration of the gradients under the curve using the modified Bernoulli equation. The number reported by the echodoppler machine software is the Doppler Mean Gradient. The usual range for the Doppler Mean Gradient can be from 10 to 150 mmHg.

____ mmHg (Enter 1-200)

107. **Aortic Insufficiency [AVALVINSUF]**

Indicate the grade of aortic insufficiency. Choose one of the following:

0= None
1= Grade 1 - Trivial
2= Grade 2 - Mild
3= Grade 3 - Moderate
4= Grade 4 - Severe
5= Not Assessed

H. PCI PROCEDURE

Skip this section if no PCI is performed on the patient.

108. **PCI Primary Operator's License Number [PLICNUM]**

Indicate the physician's license number. Do not include the leading “25” (before MA or MB). For example, license number 25MA01234500 should be entered as **MA01234500**.

_ _ _ _ _ _ _ _ _ _ _ _ (10 characters)

109. **PCI Primary Operator's Last Name [PLNAME]**

Indicate the PCI Operator’s last name.

110. **PCI Primary Operator's First Name [PFNAME]**

Indicate the PCI Operator’s first name.

111. **PCI Status [PCISTAT]**

Indicate the status of the PCI. Choose one of the following:

1= Elective: The patient's cardiac function has been stable in the days or weeks prior to the procedure. The procedure could be deferred without increased risk of compromised cardiac outcome.
2= Urgent: ALL of the following conditions are met:
   a. Not elective status.
   b. Not emergency status.
   c. Procedure required during same hospitalization in order to minimize chance of further clinical deterioration.

d. Worsening, sudden chest pain, CHF, acute myocardial infarction (AMI), anatomy, IABP, unstable angina (USA) with intravenous (IV) nitroglycerin (TNG) or rest angina (but stabilized patient) may be included.

3= Emergency: 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 and/or IABP));
      (2) Acute Evolving Myocardial Infarction within 24 hours before Cardiac Cath Lab Procedure; or
      (3) pulmonary edema requiring intubation.
   b. Mechanical dysfunction (either of the following):
      (1) shock with circulatory support; or
      (2) shock without circulatory support.

4= Emergent Salvage: The patient is undergoing CPR en route to the Cardiac Cath Lab or prior to procedure.

PCI INDICATIONS

112. **Ischemic Symptoms Compatible with AMI within 12 Hours of Onset [AMI]**

Were the patient's symptoms compatible with an acute myocardial infarction presenting within 12 hours of onset? Symptoms include: chest discomfort/pain (possibly radiating to the arm, neck or jaw), shortness of breath, back pain, sweating, and nausea. Choose one of the following:

0= No
1= Yes

113. **ST Segment Elevation Compatible with AMI [STELEV]**

Indicate if the ST elevation is compatible with AMI. Choose one of the following:

0= No
1= Yes

114. **Uninterpretable ECG [ECG]**

Indicate if the ECG was uninterpretable. An uninterpretable ECG almost always means left bundle branch block. Choose one of the following:

0= No
1= Yes

115. **Percent Stenosis of Upstream Left Main Artery [PRCTSTEN]**

Indicate the percentage of stenosis in the patient's upstream left main artery. Enter 0 if no stenosis. Leave blank if not assessed.

_____ (Enter 0-100%)

116. **Is Left Main Artery Unprotected? [UNPROT]**

Indicate if the patient's left main artery was unprotected. Choose one of the following:

0= No
1= Yes

117. **Lesion >=50% in a Major Artery [LESGTE50]**

If a coronary lesion(s) has greater than or equal to 50% stenosis in a major artery indicate if it is a de novo and/or restenosed lesion or due to subacute thrombosis. Restenosis should be coded regardless of the timeframe of restenosis. Choose one of the following:

0= No
1= Yes, De novo
2= Yes, Restenosis
3= Yes, De novo/Restenosis
4= Yes, Subacute Thrombosis

Notes:

1. De novo is defined as a lesion that is diagnosed with stenosis and treated for the first time.

2. Subacute thrombosis is defined as a previously treated lesion (no timeframe needs to be specified) that was evidenced by an imaging modality of nonocclusive thrombus formation.

118. **Acute PCI [ACUTEPCI]**

Indicate whether the PCI procedure is being performed for purposes of reperfusion in the presence of an acute MI documented in the medical record. Choose one of the following:

0= No
1= Yes, primary PCI for STEMI
2= Yes, Rescue PCI
3= Yes, Facilitated PCI
4= Yes, PCI in setting of non-STEMI or unstable angina

Note: Rescue (also known as salvage) PCI is defined as PCI after failed fibrinolysis for patients with continuing or recurrent myocardial ischemia. This should not be confused with a "salvage" status of the PCI procedure. Facilitated PCI is defined as a planned immediate PCI after reduced-dose fibrinolytic therapy or platelet glycoprotein Iib/IIIa therapy or both administered before admission to the interventional cardiology laboratory. This procedure should not be confused with primary PCI with a GP Iib/IIIa inhibitor started during PCI; from immediate, early, or delayed PCI after successful full-dose fibrinolysis; and from rescue PCI after unsuccessful fibrinolysis.

119. **Date of Symptom Onset [SODATE]**

Indicate the date of the onset of the patient's AMI symptoms.

_ _/_ _/_ _ _ _ (MM/DD/YYYY)

120. **Time of Symptom Onset [SOTIME]**

Indicate the time of the onset of the patient's AMI symptoms. Please use military time in HH:MM format.

_ _:_ _ (HH:MM)

121. **Date of Arrival [ARRDATE]**

Indicate the date the patient arrived to the facility performing the PCI as documented in the medical record, or the initial onset of ST elevation MI symptoms if occurred after the date and time of admission, but during this hospitalization. Please use MM/DD/YYYY format.

NOTE: This date refers to the **date of arrival to the cath lab**, even for patients who were already admitted to the hospital. If patient is transferred to your facility for an acute MI, enter the date and time of arrival at your facility's cath lab.

_ _/_ _/_ _ _ _ (MM/DD/YYYY)

122 **Time of Arrival [ARRTIME]**

Indicate the time the patient arrived to the facility performing the PCI as documented in the medical record, or the initial onset of ST elevation MI symptoms if occurred after the date and time of admission, but during this hospitalization. Please use military time in HH:MM format.

_ _:_ _ (HH:MM)

123. **Transfer for Primary PCI [TRANSINPCI]**

Indicate if the patient was transferred from another facility to have Primary PCI at this facility. Choose one of the following:

0= No
1= Yes

124. **Date of ED Presentation at Referring Facility [EDDATE]**

Code the date of arrival to the original, transferring facility as documented in the medical record, or the initial onset of ST elevation MI symptoms that occurred at the transferring facility, if it occurred after admission to the transferring facility. Please use MM/DD/YYYY format.

_ _/_ _/_ _ _ _ (MM/DD/YYYY)

125. **Time of ED Presentation at Referring Facility [EDTIME]**

Code the time of arrival to the original, transferring facility as documented in the medical record, or the initial onset of ST elevation MI symptoms that occurred at the transferring facility, if it occurred after admission to the transferring facility. Please use military time in HH:MM format.

_ _:_ _ (HH:MM)

126. **Reperfusion Date [REPERDATE]**

Indicate the date of the intracoronary treatment device deployment. If the exact date of first treatment device deployment is not known, indicate the start date of the procedure. Please use MM/DD/YYYY format.

_ _/_ _/_ _ _ _ (MM/DD/YYYY)

127. **Reperfusion Time [REPERTIME]**

Indicate the time of the intracoronary treatment device deployment. If the exact time of first treatment device deployment is not known, indicate the start time of the procedure. Please use military time in HH:MM format.

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 (AngjoJet or other thrombectomy/aspiration device, laser, rotational atherectomy).
4. If the lesion cannot be crossed with a guide wire or device (and thus none of the above apply), use the time of guide wire introduction.

NOTE: 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. The time of the first mechanical treatment of the culprit lesion is what is being measured, not the time when TIMI 3 flow was (or was not) restored.

_ _:_ _ (HH:MM)

128. **Transfer Out for Emergency CABG [TRANOUTCAB]**

Indicate if the patient needed to be transferred out for emergency CABG. Choose one of the following:

0= No
1= Yes

129. **Date of Call to Surgery Center [CALLDATE]**

Indicate the date the call to the surgery center was placed. Please use MM/DD/YYYY format.

_ _ / _ _ / _ _ _ _ (MM/DD/YYYY)

130. **Time of Call to Surgery Center [CALLTIME]**

Indicate the time the call to the surgery center was placed. Please use military time in HH:MM format.

_ _:_ _ (HH:MM)

131. **Date Left Original Hospital [OHDATE]**

Indicate the date the patient left the original hospital. Please use MM/DD/YYYY format.

_ _/_ _/_ _ _ _ (MM/DD/YYYY)

132. **Time Left Original Hospital [OHTIME]**

Indicate the time the patient left the original hospital. Please use military time in HH:MM format.

_ _:_ _ (HH:MM)

133. **Date of Arrival at Receiving Hospital [RHDATE]**

Indicate the date the patient arrived at the receiving hospital. Please use MM/DD/YYYY format.

_ _/_ _/_ _ _ _ (MM/DD/YYYY)

134. **Time of Arrival at Receiving Hospital [RHTIME]**

Indicate the time the patient arrived at the receiving hospital. Please use military time in HH:MM format.

_ _:_ _ (HH:MM)

135. **Date of Arrival at OR [ORDATE]**

Indicate the date the patient arrived at the operating room. Please use MM/DD/YYYY format.

_ _/_ _/_ _ _ _ (MM/DD/YYYY)

136. **Time of Arrival at OR [ORTIME]**

Indicate the time the patient arrived at the operating room. Please use military time in HH:MM format.

_ _:_ _ (HH:MM)

I. LESIONS/DEVICES

Skip this section if no PCI is performed on the patient. If a PCI is performed, please provide information for the first three lesions.

137. **Total Number of Lesions [LESIONS]**

Enter the total number of lesions.

____ (Enter 1-9)

DETAILS FOR FIRST LESION

138. **Segment Number [SEGNUM1]**

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

0 = None
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: For T or Y grafts connected to 2 areas of the native vessels, code using the most dominant vessel or the first one addressed in the procedure.

139. **Segment Pre-Stenosis Percent [PCTPRESTN1]**

For the first treated segment, indicate the pre-procedure percent stenosis. Leave blank if not assessed.

_____ (Enter 0-100%)

140. **Segment Post-Stenosis Percent [PCTPSTSTN1]**

For the first treated segment, indicate the post-procedure percent stenosis. Leave blank if not assessed.

_____ (Enter 0-100%)

141. **Pre-Procedure TIMI Flow [PRETIMI1]**

For the first segment identified, indicate the pre-procedure TIMI flow. Choose one of the following:

0= TIMI-0: No flow/no perfusion.
1= TIMI-1: Slow penetration without perfusion.
2= TIMI-2: Partial flow/partial perfusion (greater than TIMI-1 but less than TIMI-3).
3= TIMI-3: Complete and brisk flow/complete perfusion.

142 **Post-Procedure TIMI Flow [POSTTIMI1]**

For the first segment identified, indicate the post-procedure TIMI flow. Choose one of the following:

0= TIMI-0: No flow/no perfusion.
1= TIMI-1: Slow penetration without perfusion.
2= TIMI-2: Partial flow/partial perfusion (greater than TIMI-1 but less than TIMI-3).
3= TIMI-3: Complete and brisk flow/complete perfusion.

143. **Previously Treated Lesion [PTLES1]**

For the first treated segment, indicate if the lesion has been treated before in the current or a prior hospitalization. Choose one of the following:

0= No, Not Previously Treated
1= Yes

144. **Previously Treated –Balloon [PTBALL1]**

For the first treated segment, indicate if the lesion has been treated before with a Balloon in the current or a prior hospitalization. Choose one of the following:

0= No
1= Yes

145. **Previously Treated –Stent [PTSTENT1]**

For the first treated segment, indicate if the lesion was previously treated with a drug-eluting stent or a non drug eluting stent in the current or a prior hospitalization. Choose one of the following:

0= No
1= Yes, Drug Eluting Stent
2= Yes, Non Drug Eluting Stent

146. **Previously Treated –Radiation [PTRAD1]**

For the first treated segment, indicate if the lesion has been treated before with radiation in the current or a prior hospitalization. Choose one of the following:

0= No
1= Yes

147. **Previously Treated -Other/Unknown Device [PTOTH1]**

For the first treated segment, indicate if the lesion has been treated before with any device that is not a stent, balloon or radiation in the current or a prior hospitalization. Choose one of the following:

0= No
1= Yes

148. **Previously Treated Lesion Date [PTDATE1]**

If the first segment was previously treated during another PCI procedure, indicate the date of the previous PCI. If the month or day is unknown enter 01. Please use MM/DD/YYYY format.

149. **Segment in Graft [SEGGRFT1]**

If the first treated lesion is in a graft to the cited segment indicate if it is a vein graft or artery graft. (Note: Radial artery graft or free IMA grafts should be coded as artery grafts.)

Choose one of the following:

0= No Graft
1= Yes, Vein graft
2= Yes, Artery graft

150. **Location in Graft [(LOCGRFT1)]**

If the first lesion is in a graft, enter the appropriate code to indicate the location of the most severe stenosis in the graft. Choose one of the following:

1= Graft-aortic anastomosis (less than or equal to 3 mm from insertion point).
2= Body of the graft.
3= Graft distal anastomosis (less than or equal to 3 mm from insertion point).

151. **Lesion Risk [LESRISK1]**

Indicate the risk of the first lesion. Choose one of the following:

0= Non-High Risk (Non C)
1= High Risk (C Risk)

Descriptions of a High Lesion Risk (C Lesion):
- Diffuse (length >2cm)
- Excessive tortuosity of proximal segment
- Extremely angulated segments >90°
- Total occlusions >3 months old and/or bridging collaterals
- Inability to protect major side branches
- Degenerated vein grafts with friable lesions

152. **Lesion Length [LESLGTH1]**

Indicate the length of the first treated lesion in millimeters.

153. **Bifurcation Lesion [BIFURLES1]**

Indicate if the first lesion is at a bifurcation/trifurcation. A bifurcation/trifurcation is a division of a vessel into at least two branches, each of which is >2 mm or greater in diameter. In a bifurcation/trifurcation the plaque extends on both sides of the bifurcation point. It need not progress down both branches. Choose one of the following:

0= No
1= Yes

154. **Intracoronary Device Primary Indicator [INTRADEV1]**

Indicate the support, diagnostic and treatment devices that were used to treat the lesion during the PCI. Support and diagnostic devices should be listed once regardless of the number of times utilized. Treatment devices should be repeated based on utilization. If the physician is unable to cross the lesion with a guide wire, then the selection of "No device deployed" should be entered. Choose one of the following:

0=No Device Deployed
1=Balloon Only
2=Drug Eluting Stent Only
3=Bare Metal Stent Only
4=Rotational Atherectomy Only
5=Thrombectomy Only
6=Cutting Balloon Only
7=Balloon and Drug Eluting Stent Only
8=Balloon and Bare Metal Stent Only
9=Other (Specify)
10=Unsuccessful- Balloon Only
11=Unsuccessful- Drug Eluting Stent Only
12=Unsuccessful- Bare Metal Stent Only
13=Unsuccessful - Balloon and Drug Eluting Stent Only
14=Unsuccessful - Balloon and Bare Metal Stent Only
15=Unsuccessful – Other (Specify)

155. **Other Intracoronary Device Specified for Lesion 1 [SPECDEV1]**

If an intracoronary device other than the ones listed above has been used, please specify. To specify a device you must have answered "**Other**" or "**Unsuccessful – Other**" to question 154. Otherwise, skip this question.

_____ (up to 20 characters)

156. **Transient No Reflow Phenomenon During Procedure [NOREFLOW1]**

Indicate for the first treated segment, if there was a transient period where no reflow phenomenon was noted during the PCI procedure. Transient no reflow phenomenon pertains to temporary lack of flow distal to the treated segment. Choose one of the following:

0= No
1= Yes

157. **Dissection in Segment [DISSECT1]**

Indicate for the first treated segment (or for a significant side branch) if a dissection > 5 mm was observed during the PCI procedure. 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. Choose one of the following:

0= No
1= Yes

158 **Acute Closure in Segment [CLOSURE1]**

Indicate for the first treated segment if an acute closure was observed during the PCI procedure. Complete occlusion of treated vessel is usually indicated by TIMI flow of 0 or 1. Choose one of the following:

0= No
1= Yes

Note: If there is an acute closure of a distal segment that is >2mm that is treated, note the acute closure and reopening on the newly identified lesion, not this lesion. If an acute closure of a distal segment does not require further treatment, note the acute closure on the original segment. This should be coded if it was noted during the lab visit only (not post-procedure).

159. **Successful Reopening [REOPEN1]**

Indicate for the first treated segment if an acute closure was reopened and remained open at the time the patient left the cardiac cath lab. Choose one of the following:

0= No
1= Yes

160. **Perforation in Segment [PERF1]**

Indicate for the first treated segment if a perforation occurred during cath lab visit. Choose one of the following:

0= No
1= Yes

DETAILS FOR SECOND LESION

161 **Segment Number [SEGNUM2]**

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

0 = None
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: For T or Y grafts connected to 2 areas of the native vessels, code using the most dominant vessel or the first one addressed in the procedure.

162. **Segment Pre-Stenosis Percent [PCTPRESTN2]**

For the second treated segment, indicate the pre-procedure percent stenosis. Leave blank if not assessed.

_____ (Enter 0-100%)

163. **Segment Post-Stenosis Percent [PCTPSTSTN2]**

For the second treated segment, indicate the post-procedure percent stenosis. Leave blank if not assessed.

_____ (Enter 0-100%)

164. **Pre-Procedure TIMI Flow [PRETIMI2]**

For the second segment identified, indicate the pre-procedure TIMI flow. Choose one of the following:

0= TIMI-0: No flow/no perfusion.
1= TIMI-1: Slow penetration without perfusion.
2= TIMI-2: Partial flow/partial perfusion (greater than TIMI-1 but less than TIMI-3).
3= TIMI-3: Complete and brisk flow/complete perfusion.

165. **Post-Procedure TIMI Flow [POSTTIMI2]**

For the second segment identified, indicate the post-procedure TIMI flow. Choose one of the following:

0= TIMI-0: No flow/no perfusion.
1= TIMI-1: Slow penetration without perfusion.
2= TIMI-2: Partial flow/partial perfusion (greater than TIMI-1 but less than TIMI-3).
3= TIMI-3: Complete and brisk flow/complete perfusion.

166. **Previously Treated Lesion [PTLES2]**

For the second treated segment, indicate if the lesion has been treated before in the current or a prior hospitalization. Choose one of the following:

0= No, Not Previously Treated
1= Yes

167. **Previously Treated –Balloon [PTBALL2]**

For the second treated segment, indicate if the lesion has been treated before with a Balloon in the current or a prior hospitalization. Choose one of the following:

0= No
1= Yes

168. **Previously Treated –Stent [PTSTENT2]**

For the second treated segment, indicate if the lesion was previously treated with a drug-eluting stent or a non drug eluting stent in the current or a prior hospitalization. Choose one of the following:

0= No
1= Yes, Drug Eluting Stent
2= Yes, Non Drug Eluting Stent

169. **Previously Treated –Radiation [PTRAD2]**

For the second treated segment, indicate if the lesion has been treated before with Radiation in the current or a prior hospitalization. Choose one of the following:

0= No
1= Yes

170. **Previously Treated - Other/Unknown Device [PTOTH2]**

For the second treated segment, indicate if the lesion has been treated before with any device that is not a stent, balloon or radiation in the current or a prior hospitalization. Choose one of the following:

0= No
1= Yes

171. **Previously Treated Lesion Date [PTDATE2]**

If the second segment was previously treated during another PCI procedure, indicate the date of the previous PCI. If the month or day is unknown enter 01. Please use MM/DD/YYYY format.

_ _/_ _/_ _ _ _ (MM/DD/YYYY)

172. **Segment in Graft [SEGGRFT2]**

If the second treated lesion is in a graft to the cited segment indicate if it is a vein graft or artery graft. Choose one of the following:

0= No Graft
1= Yes, Vein graft
2= Yes, Artery graft

Note: Radial artery graft or free IMA grafts should be code as artery grafts.

173. **Location in Graft [LOCGRFT2]**

If the second lesion is in a graft, enter the appropriate code to indicate the location of the most severe stenosis in the graft. Choose one of the following:

1= Graft-aortic anastomosis (less than or equal to 3 mm from insertion point).
2= Body of the graft.
3= Graft distal anastomosis (less than or equal to 3 mm from insertion point).

174. **Lesion Risk [LESRISK2]**

Indicate the risk of the second lesion. Choose one of the following:

0= Non-High Risk (Non C)
1= High Risk (C Risk)

Descriptions of a High Lesion Risk (C Lesion):
- Diffuse (length >2cm)
- Excessive tortuosity of proximal segment
- Extremely angulated segments >90°
- Total occlusions >3 months old and/or bridging collaterals
- Inability to protect major side branches
- Degenerated vein grafts with friable lesions

175. **Lesion Length [LESLGTH2]**

Indicate the length of the second treated lesion in millimeters.

_____ (mm)

176. **Bifurcation Lesion [BIFURLES2]**

Indicate if the second lesion is at a bifurcation/trifurcation. A bifurcation/trifurcation is a division of a vessel into at least two branches, each of which is >2 mm or greater in diameter. In a bifurcation/trifurcation the plaque extends on both sides of the bifurcation point. It need not progress down both branches. Choose one of the following:

0= No
1= Yes

177. **Intracoronary Device Primary Indicator [INTRADEV2]**

Indicate the support, diagnostic and treatment devices that were used to treat the lesion during the PCI. Support and diagnostic devices should be listed once regardless of the number of times utilized. Treatment devices should be repeated based on utilization. If the physician is unable to cross the lesion with a guide wire, then the selection of "No device deployed" should be entered. Choose one of the following:

0=No Device Deployed
1=Balloon Only
2=Drug Eluting Stent Only
3=Bare Metal Stent Only
4=Rotational Atherectomy Only

5=Thrombectomy Only
6=Cutting Balloon Only
7=Balloon and Drug Eluting Stent Only
8=Balloon and Bare Metal Stent Only
9=Other (Specify)
10=Unsuccessful- Balloon Only
11=Unsuccessful- Drug Eluting Stent Only
12=Unsuccessful- Bare Metal Stent Only
13=Unsuccessful - Balloon and Drug Eluting Stent Only
14=Unsuccessful - Balloon and Bare Metal Stent Only
15=Unsuccessful – Other (Specify)

178. **Other Intracoronary Device Specified for Lesion 2 [SPECDEV2]**

If an intracoronary device other than the ones listed above has been used, please specify. To specify a device you must have answered "**Other**" or "**Unsuccessful – Other**" to question 177. Otherwise, skip this question.

_____ (up to 20 characters)

179. **Transient No Reflow Phenomenon During Procedure [NOREFLOW2]**

Indicate for the second treated segment, if there was a transient period where no reflow phenomenon was noted during the PCI procedure. Transient no reflow phenomenon pertains to temporary lack of flow distal to the treated segment. Choose one of the following:

0= No
1= Yes

180. **Dissection in Segment [DISSECT2]**

Indicate for the second treated segment (or for a significant side branch) if a dissection > 5 mm was observed during the PCI procedure. 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. Choose one of the following:

0= No
1= Yes

181 **Acute Closure in Segment [CLOSURE2]**

Indicate for the second treated segment if an acute closure was observed during the PCI procedure. Complete occlusion of treated vessel is usually indicated by TIMI flow of 0 or 1. Choose one of the following:

0= No
1= Yes

If there is an acute closure of a distal segment that is >2mm that is treated, note the acute closure and reopening on the newly identified lesion, not this lesion. If an acute closure of a distal segment does not require further treatment, note the acute closure on the original segment. This should be coded if it was noted during the lab visit only (not post-procedure).

182. **Successful Reopening [REOPEN2]**

Indicate for the second treated segment if an acute closure was reopened and remained open at the time the patient left the cardiac cath lab. Choose one of the following:

0= No
1= Yes

183. **Perforation in Segment [PERF2]**

Indicate for the second treated segment if a perforation occurred during cath lab visit. Choose one of the following:

0= No
1= Yes

DETAILS FOR THIRD LESION

184. **Segment Number [SEGNUM3]**

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

0= None
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: For T or Y grafts connected to 2 areas of the native vessels, code using the most dominant vessel or the first one addressed in the procedure.

185. **Segment Pre-Stenosis Percent [PCTPRESTN3]**

For the third treated segment, indicate the pre-procedure percent stenosis. Leave blank if not assessed.

_____ (0-100%)

186. **Segment Post-Stenosis Percent [PCTPSTSTN3]**

For the third treated segment, indicate the post-procedure percent stenosis. Leave blank if not assessed.

_____ (0-100%)

187. **Pre-Procedure TIMI Flow [PRETIMI3]**

For the third segment identified, indicate the pre-procedure TIMI flow. Choose one of the following:

0= TIMI-0: No flow/no perfusion.
1= TIMI-1: Slow penetration without perfusion.
2= TIMI-2: Partial flow/partial perfusion (greater than TIMI-1 but less than TIMI-3).
3= TIMI-3: Complete and brisk flow/complete perfusion.

188. **Post-Procedure TIMI Flow [POSTTIMI3]**

For the third segment identified, indicate the post-procedure TIMI flow. Choose one of the following:

0= TIMI-0: No flow/no perfusion.
1= TIMI-1: Slow penetration without perfusion.
2= TIMI-2: Partial flow/partial perfusion (greater than TIMI-1 but less than TIMI-3).
3= TIMI-3: Complete and brisk flow/complete perfusion.

189. **Previously Treated Lesion [PTLES3]**

For the third treated segment, indicate if the lesion has been treated before in the current or a prior hospitalization. Choose one of the following:

0= No, Not Previously Treated
1= Yes

190. **Previously Treated –Balloon [PTBALL3]**

For the third treated segment, indicate if the lesion has been treated before with a Balloon in the current or a prior hospitalization. Choose one of the following:

0= No
1= Yes

191. **Previously Treated – Stent [PTSTENT3]**

For the third treated segment, indicate if the lesion was previously treated with a drug-eluting stent or a non drug eluting stent in the current or a prior hospitalization. Choose one of the following:

0= No
1= Yes, Drug Eluting Stent
2= Yes, Non Drug Eluting Stent

192. **Previously Treated – Radiation [PTRAD3]**

For the third treated segment, indicate if the lesion has been treated before with Radiation in the current or a prior hospitalization. Choose one of the following:

0= No
1= Yes

193. **Previously Treated - Other/Unknown Device [PTOTH3]**

For the third treated segment, indicate if the lesion has been treated before with any device that is not a stent, balloon or radiation in the current or a prior hospitalization. Choose one of the following:

0= No
1= Yes

194. **Previously Treated Lesion Date [PTDATE3]**

If the third segment was previously treated during another PCI procedure, indicate the date of the previous PCI. If the month or day are unknown enter 01. Please use MM/DD/YYYY format.

_ _/_ _/_ _ _ _ (MM/DD/YYYY)

195. **Segment In Graft [SEGGRFT3]**

If the third treated lesion is in a graft to the cited segment indicate if it is a vein graft or artery graft. Choose one of the following:

0= No Graft
1= Yes, Vein graft
2= Yes, Artery graft

Note: Radial artery graft or free IMA grafts should be code as artery grafts.

196. **Location in Graft [LOCGRFT3]**

If the third lesion is in a graft, enter the appropriate code to indicate the location of the most severe stenosis in the graft. Choose one of the following:

1= Graft-aortic anastomosis (less than or equal to 3 mm from insertion point).
2= Body of the graft.
3= Graft distal anastomosis (less than or equal to 3 mm from insertion point).

197. **Lesion Risk [LESRISK3]**

Indicate the risk of the third lesion. Choose one of the following:

0= Non-High Risk (Non C)
1= High Risk (C Risk)

Descriptions of a High Lesion Risk (C Lesion):

- Diffuse (length >2cm)
- Excessive tortuosity of proximal segment
- Extremely angulated segments >90°
- Total occlusions >3 months old and/or bridging collaterals
- Inability to protect major side branches
- Degenerated vein grafts with friable lesions

198. **Lesion Length [LESLGTH3]**

Indicate the length of the third treated lesion in millimeters.

_____ (mm)

199. **Bifurcation Lesion [BIFURLES3]**

Indicate if the third lesion is at a bifurcation/trifurcation. A bifurcation/trifurcation is a division of a vessel into at least two branches, each of which is >2 mm or greater in diameter. In a bifurcation/trifurcation the plaque extends on both sides of the bifurcation point. It need not progress down both branches. Choose one of the following:

0= No
1= Yes

200. **Intracoronary Device Primary Indicator [INTRADEV3]**

Indicate the support, diagnostic and treatment devices that were used to treat the lesion during the PCI. Support and diagnostic devices should be listed once regardless of the number of times utilized. Treatment devices should be repeated based on utilization. If the physician is unable to cross the lesion with a guide wire, then the selection of "No device deployed" should be entered. Choose one of the following:

0=No Device Deployed
1=Balloon Only
2=Drug Eluting Stent Only
3=Bare Metal Stent Only
4=Rotational Atherectomy Only
5=Thrombectomy Only
6=Cutting Balloon Only
7=Balloon and Drug Eluting Stent Only
8=Balloon and Bare Metal Stent Only
9=Other (Specify)
10=Unsuccessful- Balloon Only
11=Unsuccessful- Drug Eluting Stent Only
12=Unsuccessful- Bare Metal Stent Only
13=Unsuccessful - Balloon and Drug Eluting Stent Only
14=Unsuccessful - Balloon and Bare Metal Stent Only
15=Unsuccessful – Other (Specify)

201. **Other Intracoronary Device Specified for Lesion 3 [SPECDEV3]**

If an intracoronary device other than the ones listed above has been used, please specify. To specify a device you must have answered "**Other**" or "**Unsuccessful – Other**" to question 200. Otherwise, skip this question.

_____ (up to 20 characters)

202. **Transient No Reflow Phenomenon During Procedure [NOREFLOW3]**

Indicate for the third treated segment, if there was a transient period where no reflow phenomenon was noted during the PCI procedure. Transient no reflow phenomenon pertains to temporary lack of flow distal to the treated segment. Choose one of the following:

0= No
1= Yes

203. **Dissection in Segment [DISSECT3]**

Indicate for the third treated segment (or for a significant side branch) if a dissection > 5 mm was observed during the PCI procedure. 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. Choose one of the following:

0= No
1= Yes

204. **Acute Closure In Segment [CLOSURE3]**

Indicate for the third treated segment if an acute closure was observed during the PCI procedure. Complete occlusion of treated vessel is usually indicated by TIMI flow of 0 or 1. Choose one of the following:

0= No
1= Yes

If there is an acute closure of a distal segment that is >2mm that is treated, note the acute closure and reopening on the newly identified lesion, not this lesion. If an acute closure of a distal segment does not require further treatment, note the acute closure on the original segment. This should be coded if it was noted during the lab visit only (not post-procedure).

205. **Successful Reopening [REOPEN3]**

Indicate for the third treated segment if an acute closure was reopened and remained open at the time the patient left the cardiac cath lab. Choose one of the following:

0= No
1= Yes

206. **Perforation in Segment [PERF3]**

Indicate for the third treated segment if a perforation occurred during cath lab visit. Choose one of the following:

0= No
1= Yes

J. ADVERSE OUTCOMES PRIOR TO DISCHARGE

Complete this section for each Admission/Discharge.

GENERAL COMPLICATIONS

207. **Periprocedural Myocardial Infarction [CPERIMI]**

Indicate the NEW presence of a periprocedural MI during the cath lab visit or after lab visit until discharge (or before any subsequent lab visits) as documented by at least 1 of the following criteria:

1. Evolutionary ST-segment elevations, development of new Q-waves in 2 or more contiguous ECG leads, or new or presumably new LBBB pattern on the ECG.
2. Biochemical evidence of myocardial necrosis; this can be manifested as (1) CK-MB > 3x the upper limit of normal or if CK-MB not available (2) total CK > 3x upper limit of normal. Because normal limits of certain blood tests may vary, please check with your lab for normal limits for CK-MB and total CK.

For patients with MI within 24 hours after CABG, the CK-MB must be greater than or equal to 5 times the upper limit of normal, and new Q waves must be present as defined above, or CK-MB value must be greater than or equal to 10 times the upper limit of normal (with or without Q waves). No symptoms are required.

Defining Reference Control Values (Upper Limit of Normal):
Reference values must be determined in each laboratory by studies using specific assays with appropriate quality control, as reported in peer-reviewed journals. Acceptable imprecision (coefficient of variation) at the 99th percentile for each assay should be defined as < or = to 10%. Each individual laboratory should confirm the range of reference values in their specific setting. Choose one of the following:

0= No
1= Yes

208. **Cardiogenic Shock [CCARDIOGEN]**

Indicate if the patient had a new clinical state of hypoperfusion noted during the cath lab visit or after lab visit until discharge (or before any subsequent lab visits) according to either of the following criteria:

1. Systolic BP < 90 and/or Cardiac Index < 2.2 despite maximal treatment **for greater than 30 minutes;**
2. IV inotropes and/or IABP necessary to maintain Systolic BP > 90 and/or CI > 2.2.

Choose one of the following:

0= No
1= Yes

209. **Congestive Heart Failure [CCHF]**

Indicate if the patient experienced documented new onset CHF or an acute reoccurrence of CHF, which necessitated new or increased pharmacologic therapy during the cath lab visit or after lab visit until discharge (or before any subsequent lab visits). CHF can be diagnosed bases on careful history and physical exam, or by one of the following criteria:

1. Unusual dyspnea on light exertion
2. Reccurent dyspnea in supine position
3. Fluid retention
4. The description of rales
5. Jugular venous distension
6. Chest X-Ray (CXR) showing pulmonary congestion/edema
7. Pulmonary edema upon physical exam

Choose one of the following:

0= No
1= Yes

210. **CVA/Stroke [CCVA]**

Indicate if the patient experienced a Cerebrovascular Accident (CVA) noted during the cath lab visit or after lab visit until discharge (or before any subsequent lab visits), as documented by a central neurological deficit persisting **for at least 24 hours**. Choose one of the following:

0= No
1= Yes

211. **Tamponade [CTAMP]**

Indicate if there was fluid in the pericardial space compromising cardiac filling, and requiring intervention during the cath lab visit or after lab visit until discharge (or before any subsequent lab visits). This should be documented by either:

1. Echo showing pericardial fluid and signs of tamponade such as right heart compromise, or
2. Systemic hypotension due to pericardial fluid compromising cardiac function.

Choose one of the following:

0= No
1= Yes

212. **Thrombocytopenia [CTHROM]**

Indicate if the patient was newly diagnosed with Thrombocytopenia during the cath lab visit or after lab visit until discharge (or before any subsequent lab visits). Thrombocytopenia is a disorder in which the number of platelets (a type of blood cell) is abnormally below the normal range assigned by your lab (normal range is usually around 140,000 to 440,000/μL). Thrombocytopenia can be associated with abnormal bleeding. Choose one of the following:

0= No
1= Yes

213. **Contrast Reaction [CCONTRAST]**

Indicate if the patient experienced a contrast reaction during the cath lab visit or after lab visit until discharge (or before any subsequent lab visits). Contrast reaction is defined as at least one of the following:

1. Anaphylaxis-including bronchospasm and/or vascular collapse,
2. Urticaria,
3. Hypotension-prolonged depression of blood pressure below 70mm Hg.

Choose one of the following:

0= No
1= Yes

214. **Renal Failure [CRENALF]**

Indicate if the patient experienced acute or worsening renal failure during the cath lab visit or after lab visit until discharge (or before any subsequent lab visits) resulting in one or more of the following:

1. Increase of serum creatinine to >2.0 mg/dl and two times the baseline creatinine level.
2. A new requirement for dialysis.

Choose one of the following:

0= No
1= Yes

215. **Emergency PCI [CEMGPCI]**

Indicate if the patient required coronary intervention as a treatment for a complication of a diagnostic cath. Choose one of the following:

0= No
1= Yes

216. **TIA [CTIA]**

Indicate if the patient had a Transient Ischemic attack (TIA) in the past 24 hours. Choose one of the following:

0= No
1= Yes

Notes:

A neurological event with the signs and symptoms of a stroke, but which goes away within a short period of time. Is also called a mini-stroke. A TIA is due to a temporary lack of adequate blood and oxygen (ischemia) to the brain. This is often caused by the narrowing (or, less often, ulceration) of the carotid arteries (the major arteries in the neck that supply blood to the brain).

TIAs typically last 2 to 30 minutes and can produce problems with vision, dizziness, weakness or trouble speaking.

217. **Sepsis [CSEPSIS]**

Indicate if the patient had sepsis. Choose one of the following:

0= No
1= Yes

218. **Arrhythmia [CARRHYT]**

Indicate if the patient had arrhythmia. It has to occur in the lab and require medication or shock for treatment. Choose one of the following:

0= No
1= Yes

219. **Ventilator Support [CVENTSUP]**

Indicate if the patient is on ventilator support. Choose one of the following:

0= No
1= Yes

VASCULAR/BLEEDING COMPLICATIONS

220. **Percutaneous Entry Site Bleeding [CENTRYSTBL]**

Indicate whether bleeding occurred at the percutaneous entry site during or after the cath lab visit until discharge. The bleeding should require a transfusion and/or prolong the hospital stay, and/or cause a drop in hemoglobin >3.0 gm/dl. Bleeding at the percutaneous entry site can be external or a hematoma >10 cm for femoral access or >2 cm for radial access; or >5 cm for brachial access. Choose one of the following:

0= No
1= Yes

221. **Retroperitoneal Bleeding [CRETROBL]**

Indicate whether retroperitoneal bleeding occurred during or after the cath lab visit until discharge. The bleeding should require a transfusion and/or prolong the hospital stay, and/or cause a drop in hemoglobin > 3.0 gm/dl. Choose one of the following:

0= No
1= Yes

222. **Gastrointestinal Bleeding [CGASTROBL]**

Indicate whether gastrointestinal bleeding occurred during or after the cath lab visit until discharge. The bleeding should require a transfusion and/or prolong the hospital stay, and/or cause a drop in hemoglobin > 3.0 gm/dl. Choose one of the following:

0= No
1= Yes

223. **Genito-Urinary Bleeding [CGUBL]**

Indicate whether genital or urinary bleeding occurred during or after the cath lab visit until discharge. The bleeding should require a transfusion and/or prolong the hospital stay, and/or cause a drop in hemoglobin > 3.0 gm/dl. Choose one of the following:

0= No
1= Yes

224. **Other/Unknown Bleeding [COTHBL]**

Indicate whether bleeding occurred at other or unknown locations during or after the cath lab visit until discharge. The bleeding should require a transfusion and/or prolong the hospital stay, and/or cause a drop in hemoglobin >3.0 gm/dl. Choose one of the following:

0= No
1= Yes

225. **Access Site Occlusion [CACCOCC]**

Indicate whether an access site occlusion occurred at the site of percutaneous entry during the procedure or after lab visit but before any subsequent lab visits. Access Site Occlusion is defined as total obstruction of the artery usually by thrombus (but may have other causes) usually at the site of access requiring surgical repair. Occlusions may be accompanied by absence of palpable pulse or doppler. Choose one of the following:

0= No
1= Yes

226. **Peripheral Embolization [CPERIEMB]**

Indicate whether a peripheral embolization occurred distal to the arterial access site during the procedure or after lab visit but before any subsequent lab visits, requiring therapy. Peripheral embolization is defined as a loss of distal pulse, pain and/or discoloration (especially the toes). This can include cholesterol emboli. Choose one of the following:

0= No
1= Yes

227. **Dissection [CDISSECT]**

Indicate whether a dissection occurred at the site of percutaneous entry during the procedure or after lab visit but before any subsequent lab visits. A dissection is defined as a disruption of an arterial wall resulting in splitting and separation of the intimal (subintimal) layers. Choose one of the following:

0= No
1= Yes

228. **Pseudoaneurysm [CPSEUDOAN]**

Indicate whether a pseudoaneurysm occurred at the site of percutaneous entry during the procedure or after lab visit but before any subsequent lab visits. Do not code for pseudoaneurysms noted after discharge. Pseudoaneurysm is defined as the occurrence of a disruption and dilation of the arterial wall without identification of the arterial wall layers at the site of the catheter entry demonstrated by arteriography or ultrasound. Choose one of the following:

0= No
1= Yes

229. **Pseudoaneurysm Treatment [CPSEUDOTRT]**

Indicate the type of treatment provided to treat the pseudoaneurym. Choose one of the following:

0= None
1= Pressure
2= Fibrin Injection
3= Surgery

230. **AV Fistula [CAVFIST]**

Indicate whether an AV Fistula occurred at the site of percutaneous entry during the procedure or after lab visit but before any subsequent lab visits. AV Fistula is defined as a connection between the access artery and the accompanying vein that is demonstrated by arteriography or ultrasound and most often characterized by a continuous bruit. Choose one of the following:

0= No
1= Yes

K. DISCHARGE

Complete this section for each Admission/Discharge.

231. **CABG Status During This Admission [CABGSTAT]**

If the patient had a CABG (Coronary Artery Bypass Graft Surgery) during this admission, select the status that best describes the clinical status of the patient at the time of surgery. Choose one of the following:

0= No CABG and patient not transferred for a CABG: The patient did not have a CABG during this admission and was not transferred to another hospital for a CABG.
1= 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.
2= Urgent: ALL of the following conditions are met:

A. Not elective status.
B. Not emergency status.
C. Procedure required during same hospitalization in order to minimize chance of further clinical deterioration.
D. Worsening, sudden chest pain, CHF, acute myocardial infarction (AMI), anatomy, IABP, unstable angina (USA) with intravenous (IV) nitroglycerin (TNG) or rest angina (but stabilized patient) may be included.

3= Emergency: 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 and/or IABP));
(2) Acute Evolving Myocardial Infarction within 24 hours before surgery; or
(3) pulmonary edema requiring intubation.
B. Mechanical dysfunction (either of the following):
(1) shock with circulatory support; or
(2) shock without circulatory support.

4= Emergent Salvage: The patient is undergoing CPR en route to the OR or prior to anesthesia induction.

5= Transferred for CABG: Patient transferred to another hospital for the CABG.

232. **CABG Date [CABGDATE2]**

If the patient had a Coronary Artery Bypass Graft (CABG) Surgery during this admission, indicate the date. Please use MM/DD/YYYY format.

_ _ /_ _/ _ _ _ _ (MM/DD/YYYY)

233. **Blood Products Transfused After Lab Visit [BLOODPROD]**

Were blood products transfused after the cath lab visit? Choose one of the following:

0= No
1= Yes

234. **Discharge Date [DATEDC]**

Indicate the date the patient was discharged from the hospital. If the patient died in the hospital the hospital discharge date is the date of death. Please use MM/DD/YYYY format.

_ _ /_ _/ _ _ _ _ (MM/DD/YYYY)

235. **Discharge Status [MORTALITY]**

Specify whether the patient was alive or dead at discharge from the hospitalization in which the procedure occurred. Choose one of the following:

1= Alive
2= Dead

236. **Date of Death [DATEDEATH]**

If the patient died in the cath lab, in transit, or during the hospitalization, indicate the date the patient expired. Please use MM/DD/YYYY format.

237. **Primary Cause of Death [CAUSEDEATH]**

If the patient is dead, select the PRIMARY cause of death, i.e. the first significant abnormal event which ultimately led to the patient's death.
Choose one of the following:

1= Cardiac
2= Neurologic
3= Renal
4= Vascular
5= Infection
6= Pulmonary
7= Valvular
8= Unknown
9= Other

238. **Location of Death [DEATHWHERE]**

If the patient expired during this hospitalization, indicate where the patient expired. Choose one of the following:

1= Died in Cath Lab
2= Died in Hospital Performing Procedure, but not in Cath Lab
3= Died in Transit to Cardiac Surgery Center
4= Died at Cardiac Surgery Center

239. **Discharge Location [DCWHERE]**

If the patient was alive during this hospitalization, indicate where the patient was discharged to. Choose one of the following:

0= Not Discharged
1= Home
2= Other Acute Care
3= Rehab/Subacute Care
4= Nursing Home
5= Unknown
6= Other

DISCHARGE MEDICATIONS

240. **Aspirin [DMEDASP]**

Indicate if aspirin was prescribed at discharge. Choose one of the following:

0= No
1= Yes

241. **Beta Blocker [DMEDBB]**

Indicate if beta blockers were prescribed at discharge. Choose one of the following:

0= No
1= Yes

242 **Coumadin [DMEDCOU]**

Indicate if coumadin was prescribed at discharge. Choose one of the following:

0= No
1= Yes

243. **Platelet Agg Inhibitors [DMEDPAI]**

Indicate if platelet agg inhibitors were prescribed at discharge. Choose one of the following:

0= No
1= Yes

244. **Lipid Lowering Agents [DMEDLLA]**

Indicate if lipid lowering agents were prescribed at discharge. Choose one of the following:

0= No
1= Yes

245**. ACEI/ARB [DMEDACEI]**

Indicate if ACEI/ARB were prescribed at discharge. Choose one of the following:

0= No
1= Yes

246. **Reserved 1 [RESERVED1]**

Reserved field for future use.

247. **Reserved 2 [RESERVED2]**

Reserved field for future use.

248. **Reserved 3 [RESERVED3]**

Reserved field for future use.

APPENDIX A: LIST OF HOSPITALS IN NEW JERSEY

Hospital Code	Hospital Name
0642	AtlantiCare Regional Medical Center-City
0641	AtlantiCare Regional Medical Center-Mainland
0260	Barnert Hospital
0250	Bayonne Medical Center
1120	Bayshore Community Hospital
0580	Bergen Regional Medical Center
0110	Cape Regional Medical Center
0920	Capital Health System at Fuld
0440	Capital Health System at Mercer
0180	Cathedral-St. James Hospital
0960	Cathedral-St. Michael's Medical Center
1110	CentraState Medical Center
0170	Chilton Memorial Hospital
0160	Christ Hospital
0090	Clara Maass Medical Center
0930	Columbus Hospital
0410	Community Medical Center
0140	Cooper Hospital/University Medical Center
0310	Deborah Heart and Lung Center
0830	East Orange General Hospital
0450	Englewood Hospital and Medical Center
1050	Greenville Hospital
0010	Hackensack University Medical Center
1150	Hackettstown Community Hospital
0080	Holy Name Hospital
0050	Hunterdon Medical Center
0130	Irvington General Hospital
0740	Jersey City Medical Center
0730	Jersey Shore University Medical Center
1080	JFK Medical Center (Edison)
0862	Kennedy Mem. Hospitals UMC-Cherry Hill
0863	Kennedy Mem. Hospitals UMC-Stratford
0861	Kennedy Mem. Hospitals UMC-Wash. Twp.
0840	Kimball Medical Center
0610	Lourdes Medical Center of Burlington County
1180	Meadowlands Hospital Medical Center
0910	Memorial Hospital of Salem County
0750	Monmouth Medical Center
0150	Morristown Memorial Hospital
0540	Mountainside Hospital
0630	Muhlenberg Regional Medical Center

Appendix A (Continued)

Hospital Code	Hospital Name
0020	Newark Beth Israel Medical Center
0280	Newton Memorial Hospital
0522	Ocean Medical Center
0290	Our Lady of Lourdes Medical Center
0510	Overlook Hospital
0030	Palisades General Hospital of New York
0370	Pascack Valley Hospital
0200	PBI Regional Medical Center
0392	Raritan Bay Medical Center-Old Bridge
0391	Raritan Bay Medical Center-Perth Amboy
0340	Riverview Medical Center
0380	Robert Wood Johnson University Hospital
1100	RWJ University Hospital at Hamilton
0240	RWJ University Hospital at Rahway
0470	Shore Memorial Hospital
0480	Somerset Medical Center
0322	South Jersey Healthcare -Bridgeton
0690	South Jersey Healthcare -Elmer
0324	South Jersey Healthcare Regional MC
1130	Southern Ocean County Hospital
0760	St. Barnabas Medical Center
0500	St. Clare's Hospital-Denville
0670	St. Clare's Hospital-Dover
1200	St. Clare's Hospital-Sussex
0210	St. Francis Medical Center
0190	St. Joseph's Hospital and Medical Center
1160	St. Joseph's Wayne Hospital
0400	St. Mary Hospital (Hoboken)
0060	St. Mary's Hospital (Passaic)
0700	St. Peter's University Hospital
0270	Trinitas Hospital
1190	UMDNJ-University Hospital
0810	Underwood - Memorial Hospital
0900	Union Hospital
0100	University Medical Center at Princeton
0120	Valley Hospital
0570	Virtua-Memorial Hospital Burlington County
0222	Virtua-West Jersey Hospital Berlin
0224	Virtua-West Jersey Hospital Marlton
0221	Virtua-West Jersey Hospital Voorhees
0600	Warren Hospital
0880	William B. Kessler Memorial Hospital

APPENDIX B
Insurance Payor Classification Guide (Item # 17)

Medicare

Title XVII Part A
Title XVII Part B

Medicaid

Title XIX

Health Maintenance Organizations (HMO)

Americaid Inc.
American Preferred Provider Plan Inc.
HIP/RHP of New Jersey
HMO Blue (Medigroup - Central)
HMO of PA/NJ (U.S. Health Care)
Aetna Health Plans of N.J. Inc.
CIGNA Health Plan of New Jersey
Metra Health Care Plan of Upstate New York
Prucare of New Jersey
Garden State Health Plan
HMO Blue Medigroup - Metro
HMO Blue Medigroup - North
HMO Blue Medigroup - South
HMO Blue Medigroup - Shore line
Metra Health Care Plan of New Jersey
NYL Care Health Plans of New Jersey Inc.
Oxford Health Plan
Sanus of New Jersey
CIGNA Health Plan of Southern N.J.
Greater Atlantic Health Services
Amerihealth HMO Inc.
Atlanticare Health Plan
Chubb Health Plan
Community Health Care and Development Corp.
First Option Health Plan
Harmony Health Plan
HMO Blue (BC/BS of NJ)
Liberty Health Plan
Managed Health Care Systems of New Jersey Inc.
Physician Health Care Plan of New Jersey
Physician Health Services of New Jersey Inc
University Health Plan Inc.
Other HMO

Blue Cross Plan

Alaska
Alabama
Arizona
Arkansas
California
Colorado
Connecticut
Delaware
District of Columbia
Florida
Georgia
Hawaii
Idaho
Illinois
Indiana
Iowa
Kansas
Kentucky
Louisiana
Maine
Maryland
Massachusetts
Michigan
Minnesota
Mississippi
Missouri
Montana
Nebraska
Nevada
New Hampshire
New Jersey-All other groups
New Jersey Non-Group Line of Business
New Jersey FEP
Garden State
Host
New Mexico
New York
North Carolina
North Dakota
Ohio
Cleveland
Oklahoma
Oregon
Pennsylvania
Rhode Island
South Carolina
Tennessee

APPENDIX B (Cont.)

Blue Cross Plan (Continued)

- Texas
- Utah
- Virginia
- Vermont
- Washington
- West Virginia
- Wisconsin
- Wyoming
- Puerto Rico
- Other Blue Cross

Commercial

- AARP
- Aetna
- NJ Carpenters Health Fund
- Connecticut General
- Continental Assurance
- Equitable
- Guardian Life
- Intercontinental
- John Hancock
- Massachusetts Mutual
- Metropolitan Life
- Mutual of Omaha
- New York Life
- Provident Alliance
- Prudential
- Travelers
- Washington National Insurance
- New Jersey Auto Dealers Association
- Allstate
- Mutual Life of New York
- National Association of Letter Carriers
- Local Union Insurance
- Lincoln National
- New Jersey Turnpike Authority
- Rasmussen
- Inter County Health Plan
- American Postal Workers
- Leader Administrators
- Fred S. James (James Benefit)
- Mail Handlers Benefit Plan
- Other Commercial Insurance

Self Pay

- Direct
- Other Source of Patient Pay

Tricare (Formerly CHAMPUS)

Uninsured/Indigent

- Charity Care

Other

- Department of Vocational Rehabilitation
- New Jersey State Health Benefits Plan
- Other Government
- Premier Preferred Care of New Jersey
- Union Insurance
- Personnel Health Program
- Magnet (Magna Care)
- Hospital Responsibility
- QualCare
- Other
  - No Fault
    - Allstate
    - New Jersey Manufacturers
    - State Farm
    - Other No Fault
  - Workers Compensation
    - Aetna
    - Insurance Company of North America
    - Liberty Mutual
    - Employers Mutual
    - New Jersey Manufacturers
    - Travelers
    - Other Workers Compensation

APPENDIX C: New Jersey Cardiac Catheterization Data Registry, Version 2.0

(Please report data only for patients 16 years or older.)

A. ADMINISTRATIVE

1. Facility Code: _____ 2. Facility Name: _____

3. Procedure Type *(Choose only one)*:
☐Diagnostic Cath. Only ☐ Coronary Intervention Only ☐ Diagnostic Cath. and Coronary Intervention

B. DEMOGRAPHICS

4. Last Name: _____ 5. First Name: _____ 6. MI:

7. SSN: ___ - ___ - ___ 8. Medical Record No.: _____

9. Date of Birth: ___ / ___ / ___ 10. Gender: ☐Male ☐Female

11. Race *(Choose only one)*:
☐White ☐Black ☐Asian ☐Native American/Alaska Native ☐Hawaiian/Other Pacific Islander ☐Other

12. Hispanic or Latino Origin? ☐Yes ☐No 13. Patient Zip Code: _____

C. ADMISSION

14. Admission Date: ___ / ___ / ___

15. Admission Status:
☐Outpatient Referral ☐ED ☐Transfer–Acute Care Facility ☐Transfer–Non-Acute Care Facility ☐Other

16. Inpatient Status: ☐Yes ☐No

17. Insurance Payor:
☐BC/BS ☐HMO ☐Medicare ☐Tricare (CHAMPUS) ☐Other
☐Commercial ☐Medicaid ☐Self Pay ☐Uninsured/Indigent

ADMISSION/LAB MEDICATIONS (Administered on admission up to and including all cath. lab visits):

Medication	Yes	No	Medication	Yes	No
18. Aspirin	☐	☐	25. Platelet Agg. Inhib.	☐	☐
19. Beta Blocker	☐	☐	26. Renal Adj. Therapy	☐	☐
20. Coumadin	☐	☐	27. Lipid Lowering Agents	☐	☐
21. Glycoprotein IIbIIIa Inhibitors	☐	☐	28. Thrombin Inhibitors	☐	☐
22. Heparin Low Molecular Weight	☐	☐	29. Thrombolytics	☐	☐
23. Heparin Unfract.	☐	☐	30. Other	☐	☐
24. ACEI/ARB	☐	☐	→ 31. If Other, Specify:		

D. HISTORY AND RISK FACTORS

32. Height: _____ cm. 33. Weight: _____ kg.

34. Previous MI (>7 days)? ☐Yes ☐No 35. CHF (Previous History)? ☐Yes ☐No

36. Most recent EF: _____ % 37. EF Method: ☐Not Done ☐LVG ☐Radionuclide ☐Estimate ☐Echo

38. Diabetes: ☐Yes ☐No → 39. If Yes, Diabetes Control: ☐None ☐Insulin ☐Oral ☐Diet

40. Renal Failure (Previous History)? ☐Yes ☐No → 41. If Yes, Dialysis? ☐Yes ☐No

42. Cerebrovascular Disease? ☐Yes ☐No

43. Cerebrovascular Accident? ☐Yes ☐No → 44. If Yes, When? ☐ ≤2 weeks ☐ >2 weeks

45. Peripheral Vascular Disease? ☐Yes ☐No 46. Chronic Lung Disease? ☐Yes ☐No

47. Dyslipidemia? ☐Yes ☐No 48. Hypertension? ☐Yes ☐No

49. Tobacco History? ☐Never ☐Current ☐Former 50. Previous Diagnostic Cath.? ☐Yes ☐No

51. Previous PCI? ☐Yes ☐No → 52. If Yes, Date of most recent: ___ / ___ / ___

53. Previous CABG? ☐Yes ☐No → 54. If Yes, Date of most recent: ___ / ___ / ___

55. Previous Valve Surgery? ☐Yes ☐No 56. Previous Cardiac Transplant? ☐Yes ☐No

E. CURRENT CLINICAL STATUS

57. CHF (Current Status)? ☐Yes ☐No
58. NYHA: ☐ I ☐ II ☐ III ☐ IV
59. Cardiogenic Shock? ☐Yes ☐No
60. Hemodynamically Stable? ☐Yes ☐No
61. Hypotension? ☐Yes ☐No
62. Last Creatinine: _____ mg/dl
63. Outcome of Non-Invasive Test: ☐No Test ☐Positive ☐Negative ☐Equivocal
64. Ventilator Support? ☐Yes ☐No
65. Defibrillation? ☐Yes ☐No
66. Admission Symptom (Sx) Presentation:
- ☐ No Sx/No Angina
- ☐ Atypical Chest Pain
- ☐ Stable Angina
- ☐ Unstable Angina
- ☐ Non-STEMI
- ☐ STEMI

67. If any symptom, Time Period Sx Onset to Admission:
- ☐ > 0° - ≤ 6 hrs
- ☐ > 6° - ≤ 12°
- ☐ > 12° - ≤ 24°
- ☐ > 24° - ≤ 48°
- ☐ > 48° - ≤ 72°
- ☐ > 72° - ≤ 7d
- ☐ Silent MI (No Time Period)

F. CATH LAB VISIT

68. Procedure Date: _____ / _____ / _____
69. Right Heart Cath? ☐Yes ☐No
70. Left Heart Cath? ☐Yes ☐No
71. Coronary Angiography? ☐Yes ☐No
72. Ventricular Angiography? ☐Yes ☐No
73. Other Angiography? ☐Yes ☐No
74. PCI? ☐Yes ☐No
75. Fluoro Time? _____ Minutes

HEMODYNAMIC SUPPORT:

76. IABP? ☐Yes ☐No
→ 77. If Yes, IABP Placement Timing: ☐ Before Lab Visit ☐ During Lab Visit ☐ After Lab Visit
78. Vasopressors/Inotropes: ☐ None ☐ Before Lab Visit ☐ During Lab Visit ☐ After Lab Visit
79. Other Clinical Support? ☐Yes ☐No

LV STATUS:

80. LV Function Assessed? ☐Yes ☐No
→ 81. If Yes, LV Wall Motion: ☐ Normal ☐ Abnormal
82. EF? _____ %
83. Ventilator Support (in Lab)? ☐Yes ☐No
84. Defibrillation (in Lab)? ☐Yes ☐No

G. DIAGNOSTIC CATH PROCEDURE *(Skip this section if no diagnostic cath performed)*

85. Operator License Number: _____
86. Operator Last Name: _____ 87. Operator First Name: _____
88. Cardiac Cath. Status: ☐ Elective ☐ Urgent ☐ Emergency

INDICATIONS:

89. Valvular Heart Disease? ☐Yes ☐No
90. Arrhythmia? ☐Yes ☐No
91. Other Cardiac Indications: ☐ None ☐ Congenital Heart Disease ☐ Heart Failure ☐ Cardiomyopathy ☐ Cardiomyopathy/Heart Failure ☐ Other

G. DIAGNOSTIC CATH PROCEDURE, Continued

INDICATIONS, Continued:

Coronary Anatomy (if assessed, enter percent):

	Native Artery: Percent Stenosis	Grafts (Complete if Previous CABG=Yes): Percent Stenosis
Left Main:	92. _____ %	//////////////////////
Prox LAD:	93. _____ %	98. _____ %
Mid/Distal LAD:	94. _____ %	99. _____ %
Circumflex:	95. _____ %	100. _____ %
RCA:	96. _____ %	101. _____ %
Ramus:	97. _____ %	102. _____ %

VALVE FINDINGS:

103. Mitral Insufficiency: ☐ None ☐ Grade 1 ☐ Grade 2 ☐ Grade 3 ☐ Grade 4 ☐ Not Assessed

104. Aortic Stenosis: ☐ Yes ☐ No ☐ Not Assessed

→ If Yes, 105. Calculated Valve Area: _____ cm^2

106. Doppler Mean Gradient: _____ mmHg

107. Aortic Insufficiency: ☐ None ☐ Grade 1 ☐ Grade 2 ☐ Grade 3 ☐ Grade 4 ☐ Not Assessed

H. PCI PROCEDURE *(Skip this section if no PCI performed)*

108. Operator License Number: _____

109. Operator Last Name: _____ 110. Operator First Name: _____

111. PCI Status: ☐ Elective ☐ Urgent ☐ Emergency ☐ Salvage

INDICATIONS:

112. Ischemic symptoms compatible with AMI within 12 hours of onset? ☐Yes ☐ No

113. ST segment elevation compatible with AMI? ☐Yes ☐ No

114. Uninterpretable ECG? ☐Yes ☐ No

115. % Stenosis of upstream left main artery? _____ %

116. Is left main artery unprotected? ☐Yes ☐ No

---

117. Lesion ≥ 50%:

☐ No ☐ Yes-De novo ☐ Yes-Restenosis ☐ Yes-De Novo/Restenosis ☐ Yes-Subacute Thrombosis

118. Acute PCI:

☐ No ☐ Yes-Primary PCI for STEMI ☐ Yes-Rescue PCI
☐ Yes-Facilitated PCI ☐ Yes-Non-STEMI/Unstable Angina

→ If Yes-Primary PCI for STEMI:

Symptom Onset: 119. Date: ___/___/___ 120. Time: ___:___

Date/Time of Arrival: 121. Date: ___/___/___ 122. Time: ___:___

123. Transfer in for Primary PCI: ☐Yes ☐No

→ If Yes, ED Presentation at Referring Facility:

124. Date: ___/___/___ 125. Time: ___:___

Reperfusion Date/Time: 126. Date: ___/___/___ 127. Time: ___:___

128. Transfer out for Emergency CABG: ☐Yes ☐No

→ If Yes, Call to Surgery Center: 129. Date: ___/___/___ 130. Time: ___:___

Left Original Hospital: 131. Date: ___/___/___ 132. Time: ___:___

Arrival at Receiving Hosp.: 133. Date: ___/___/___ 134. Time: ___:___

Arrival at OR: 135. Date: ___/___/___ 136. Time: :

I. **LESIONS/DEVICES** *(Skip this section if no PCI performed. Provide detailed information for the first 3 lesions.))*

137. Total Number of Lesions: _____

Lesion Counter:		1	2	3
Segment Number:		138.	161.	184.
% Pre-Stenosis:		139. _____%	162. _____%	185. _____%
% Post-Stenosis:		140. _____%	163. _____%	186. _____%
Pre-Proc TIMI Flow:		141. 0☐No 2☐Partial 1☐Slow 3☐Complete	164. 0☐No 2☐Partial 1☐Slow 3☐Complete	187. 0☐No 2☐Partial 1☐Slow 3☐Complete
Post-Proc TIMI Flow:		142. 0☐No 2☐Partial 1☐Slow 3☐Complete	165. 0☐No 2☐Partial 1☐Slow 3☐Complete	188. 0☐No 2☐Partial 1☐Slow 3☐Complete
Prev. Treated Lesion:		143. ☐Yes ☐No	166. ☐Yes ☐No	189. ☐Yes ☐No
If Yes:	Select Multiple:	144. ☐Balloon 145. ☐DES or NonDES 146. ☐Radiation 147. ☐Other/Unknown	167. ☐Balloon 168. ☐DES or NonDES 169. ☐Radiation 170. ☐Other/Unknown	190. ☐Balloon 191. ☐DES or NonDES 192. ☐Radiation 193. ☐Other/Unknown
	Prev. Treat Date:	148. ___/___/___	171. ___/___/___	194. ___/___/___
Segment in Graft:		149. ☐No ☐Yes-Vein ☐Yes-Artery	172. ☐No ☐Yes-Vein ☐Yes-Artery	195. ☐No ☐Yes-Vein ☐Yes-Artery
→ If Yes Loc. In Graft:		150. ☐Aortic ☐Body ☐Distal	173. ☐Aortic ☐Body ☐Distal	196. ☐Aortic ☐Body ☐Distal
Lesion Risk:		151. ☐Non-High/Non-C ☐High/C	174. ☐Non-High/Non-C ☐High/C	197. ☐Non-High/Non-C ☐High/C
Lesion Length (mm):		152. _____ mm	175. _____ mm	198. _____ mm
Bifurcation Lesion:		153. ☐Yes ☐No	176. ☐Yes ☐No	199. ☐Yes ☐No
Intracoronary Devices (*Note: For each lesion enter either "No Device Deployed" or one of the following):*		154. 0 ☐ No Device Deployed 1 ☐ Balloon Only 2 ☐ Drug Eluting Stent Only 3 ☐ Bare Metal Stent Only 4 ☐ Rotational Atherectomy Only 5 ☐ Thrombectomy Only 6 ☐ Cutting Balloon Only 7 ☐ Balloon and Drug Eluting Stent Only 8 ☐ Balloon and Bare Metal Stent Only 9 ☐ Other (Specify) 10 ☐ Unsuccessful- Balloon Only 11 ☐ Unsuccessful- Drug Eluting Stent Only 12 ☐ Unsuccessful- Bare Metal Stent Only 13 ☐ Unsuccessful - Balloon and Drug Eluting Stent Only 14 ☐ Unsuccessful - Balloon and Bare Metal Stent Only 15 ☐ Unsuccessful–Other (Specify) → 155. Specify:	177. 0 ☐ No Device Deployed 1 ☐ Balloon Only 2 ☐ Drug Eluting Stent Only 3 ☐ Bare Metal Stent Only 4 ☐ Rotational Atherectomy Only 5 ☐ Thrombectomy Only 6 ☐ Cutting Balloon Only 7 ☐ Balloon and Drug Eluting Stent Only 8 ☐ Balloon and Bare Metal Stent Only 9 ☐ Other (Specify) 10 ☐ Unsuccessful- Balloon Only 11 ☐ Unsuccessful- Drug Eluting Stent Only 12 ☐ Unsuccessful- Bare Metal Stent Only 13 ☐ Unsuccessful - Balloon and Drug Eluting Stent Only 14 ☐ Unsuccessful - Balloon and Bare Metal Stent Only 15 ☐ Unsuccessful–Other (Specify) → 178. Specify:	200. 0 ☐ No Device Deployed 1 ☐ Balloon Only 2 ☐ Drug Eluting Stent Only 3 ☐ Bare Metal Stent Only 4 ☐ Rotational Atherectomy Only 5 ☐ Thrombectomy Only 6 ☐ Cutting Balloon Only 7 ☐ Balloon and Drug Eluting Stent Only 8 ☐ Balloon and Bare Metal Stent Only 9 ☐ Other (Specify) 10 ☐ Unsuccessful- Balloon Only 11 ☐ Unsuccessful- Drug Eluting Stent Only 12 ☐ Unsuccessful- Bare Metal Stent Only 13 ☐ Unsuccessful - Balloon and Drug Eluting Stent Only 14 ☐ Unsuccessful - Balloon and Bare Metal Stent Only 15 ☐ Unsuccessful–Other (Specify) → 201. Specify:
No Reflow Phenom		156. ☐Yes ☐No	179. ☐Yes ☐No	202. ☐Yes ☐No
Dissection		157. ☐Yes ☐No	180. ☐Yes ☐No	203. ☐Yes ☐No
Acute Closure		158. ☐Yes ☐No	181. ☐Yes ☐No	204. ☐Yes ☐No
→ If Yes: Successful Reopening		159. ☐Yes ☐No	182. ☐Yes ☐No	205. ☐Yes ☐No
Perforation		160. ☐Yes ☐No	183. ☐Yes ☐No	206. ☐Yes ☐No

J. ADVERSE OUTCOMES PRIOR TO DISCHARGE *(Complete this section for each Admission/Discharge)*

GENERAL COMPLICATIONS:

207. Periprocedural MI	☐Yes	☐No
208. Cardiogenic Shock	☐Yes	☐No
209. CHF	☐Yes	☐No
210. CVA/Stroke	☐Yes	☐No
211. Tamponade	☐Yes	☐No
212. Thrombocytopenia	☐Yes	☐No
213. Contrast Reaction	☐Yes	☐No
214. Renal Failure	☐Yes	☐No
215. Emergency PCI	☐Yes	☐No
216. TIA	☐Yes	☐No
217. Sepsis	☐Yes	☐No
218. Arrhythmia	☐Yes	☐No
219. Ventilator Support	☐Yes	☐No

VASCULAR/BLEEDING COMPLICATIONS:

220. Bleeding at Percutaneous Entry Site	☐Yes	☐No
221. Retroperitoneal Bleeding	☐Yes	☐No
222. Gastrointestinal Bleeding	☐Yes	☐No
223. Genito-Urinary Bleeding	☐Yes	☐No
224. Bleeding - Other/Unknown Cause	☐Yes	☐No
225. Access Site Occlusion	☐Yes	☐No
226. Peripheral Embolization	☐Yes	☐No
227. Dissection	☐Yes	☐No
228. Pseudoaneurysm	☐Yes	☐No

→ 229. If Yes, Treatment:
None ☐Pressure ☐Fibrin Injection ☐Surgery

230. AV Fistula	☐Yes	☐No

K. DISCHARGE *(Complete this section for each Admission/Discharge)*

231. CABG Status - During This Admission:
☐No CABG ☐Elective ☐Urgent ☐Emergency ☐Salvage ☐ Transferred for CABG

→ If Yes,232. CAB Date: _____/_____/_____

233. Blood products transfused after lab visit: ☐Yes ☐No

234. Discharge Date: _____/_____/_____ 235. Discharge Status: ☐Alive ☐Dead

236. If Dead, Date of Death: _____/_____/_____

237. If Dead, Primary Cause of Death:
☐Cardiac ☐Neurologic ☐Renal ☐Vascular ☐Infection
☐Pulmonary ☐Valvular ☐Unknown ☐Other

238. If Dead, Location of Death:
☐Died in Cath Lab ☐Died in Hospital Performing Procedure, but not in Cath Lab
☐Died in Transit to Cardiac Surgery Center ☐Died at Cardiac Surgery Center

239. If Alive, Discharge Location:
☐Not Discharged ☐Home ☐Other Acute Care ☐Rehab/Subacute Care
☐Nursing Home ☐Unknown ☐Other

IF ALIVE AT DISCHARGE, MEDICATIONS (Prescribed at Discharge):

Medication			**Medication**		
240. Aspirin:	☐Yes	☐No	243. Platelet Agg. Inhib.:	☐Yes	☐No
241. Beta Blocker:	☐Yes	☐No	244. Lipid-Lowering Agents:	☐Yes	☐No
242. Coumadin:	☐Yes	☐No	245. ACEI/ARB:	☐Yes	☐No

246. Reserved 1: 247. Reserved 2: 248. Reserved 3:

APPENDIX D

THE NEW JERSEY CARDIAC CATHETERIZATION DATA REGISTRY, VERSION 2.0

FILE LAYOUT

ITEM NUMBER	FIELD DESCRIPTION	FIELD NAME	FIELD TYPE	ACCEPTABLE RESPONSE	FIELD WIDTH
A. ADMINISTRATIVE					
1	FACILITY CODE	HOSPNUM	NUMERIC	10-1200	4
2	FACILITY NAME	HOSPNAME	TEXT		50
3	PROCEDURE TYPE	PROCTYPE	NUMERIC	1=DIAGNOSTIC CATH ONLY 2=INTERVENTION ONLY 3=DIAGNOSTIC & INTERVENTION	1
B. DEMOGRAPHICS					
4	PATIENT'S LAST NAME	LNAME	TEXT	FULL LAST NAME	15
5	PATIENT'S FIRST NAME	FNAME	TEXT	FULL FIRST NAME	10
6	PATIENT'S MIDDLE INITIAL	MI	TEXT	MIDDLE INITIAL	1
7	PATIENT'S SOCIAL SECURITY NUMBER	SSNUM	**TEXT**	XXX-XX-XXXX	11
8	PATIENT'S MEDICAL RECORD NUMBER	MEDRECNO	**TEXT**	ENTER NUMBER AS PROVIDED	12
9	PATIENT'S DATE OF BIRTH	DOB	DATE	MM/DD/YYYY	10
10	PATIENT'S GENDER	SEX	NUMERIC	0=MALE 1=FEMALE	1
11	RACE	RACE	NUMERIC	1=WHITE 2=BLACK 3=ASIAN 4=NATIVE AMERICAN/ ALASKA NATIVE 5=HAWAIIAN/OTHER PACIFIC ISLANDER 6=OTHER	1
12	HISPANIC OR LATINO ORIGIN	HISPANIC	NUMERIC	0=NO 1=YES	1
13	PATIENT ZIP CODE	ZIP	**TEXT**	ENTER FIRST 5 DIGITS	5
C. ADMISSION					
14	DATE OF ADMISSION	ADMDATE	DATE	MM/DD/YYYY	10
15	ADMISSION STATUS	ADMSTATUS	NUMERIC	1=OUTPATIENT REFERRAL 2=ED 3=TRANSF-ACUTE CARE FAC 4=TRANSF-NON ACF 5=OTHER	1
16	INPATIENT STATUS	INPATIENT	NUMERIC	0=NO 1=YES	1
17	INSURANCE PAYOR	INSURER	NUMERIC	1=BLUE CROSS/BLUE SHIELD 2=COMMERCIAL 3=HMO 4=MEDICAID 5=MEDICARE 6=SELF-PAY 7=TRICARE (CHAMPUS) 8=UNINSURED/INDIGENT 9=OTHER	1

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FILE LAYOUT

ITEM NUMBER	FIELD DESCRIPTION	FIELD NAME	FIELD TYPE	ACCEPTABLE RESPONSE	FIELD WIDTH
	ADMISSION MEDICATIONS				
18	ASPIRIN	AMEDASP	NUMERIC	0=NO 1=YES	1
19	BETA BLOCKER	AMEDBB	NUMERIC	0=NO 1=YES	1
20	COUMADIN	AMEDCOU	NUMERIC	0=NO 1=YES	1
21	GLYCOPROTEIN IIBIIA INHIBITORS	AMEDGLY	NUMERIC	0=NO 1=YES	1
22	HEPARIN LOW MOLECULAR WEIGHT	AMEDHLMW	NUMERIC	0=NO 1=YES	1
23	HEPARIN UNFRACT.	AMEDHU	NUMERIC	0=NO 1=YES	1
24	ACEI/ARB	AMEDACEI	NUMERIC	0=NO 1=YES	1
25	PLATELET AGG INHIBITORS	AMEDPAI	NUMERIC	0=NO 1=YES	1
26	RENAL ADJ THERAPY	AMEDRAT	NUMERIC	0=NO 1=YES	1
27	LIPID LOWERING AGENTS	AMEDLLA	NUMERIC	0=NO 1=YES	1
28	THROMBIN INHIBITORS	AMEDTI	NUMERIC	0=NO 1=YES	1
29	THROMBOLYTICS	AMEDTHRO	NUMERIC	0=NO 1=YES	1
30	OTHER	AMEDOTH	NUMERIC	0=NO 1=YES	1
31	SPECIFY OTHER DRUG	AMEDSPEC	TEXT		20
D. HISTORY AND RISK FACTORS					
32	HEIGHT IN CENTIMETERS	HT	NUMERIC	CM (RANGE 80.0-245.0)	4
33	WEIGHT IN KILOGRAMS	WT	NUMERIC	KG (RANGE 20.0-300.0)	4
34	PREVIOUS MI (>7 DAYS)	PRIORMI	NUMERIC	0=NO 1=YES	1
35	CONGESTIVE HEART FAILURE (PREVIOUS)	PRIORCHF	NUMERIC	0=NO 1=YES	1
36	EJECTION PERCENT	EJPCT1	NUMERIC	1-99 (BLANK IF NOT ASSESSED)	3
37	EJECTION FRACTION METHOD	EJMETHOD	NUMERIC	0=NOT DONE 1=LV GRAM 2=RADIONUCLIDE 3=ECHO 4=ESTIMATE	1
38	DIABETES	DIABETES	NUMERIC	0=NO 1=YES	1
39	DIABETES CONTROL	DIABCONT	NUMERIC	0=NONE 1=INSULIN 2=ORAL 3=DIET	1
40	RENAL FAILURE	RENAL	NUMERIC	0=NO 1=YES	1
41	DIALYSIS	DIALYSIS	NUMERIC	0=NO 1=YES	1
42	CEREBROVASCULAR DISEASE	CVD	NUMERIC	0=NO 1=YES	1
43	CEREBROVASCULAR ACCIDENT	CVA	NUMERIC	0=NO 1=YES	1
44	CEREBROVASCULAR ACCIDENT WHEN	CVAWHEN	NUMERIC	1=RECENT ≤ 2 WEEKS 2=REMOTE > 2 WEEKS	1
45	PERIPHERAL VASCULAR DISEASE	PVD	NUMERIC	0=NO 1=YES	1
46	CHRONIC LUNG DISEASE	LUNGDIS	NUMERIC	0=NO 1=YES	1
47	DYSLIPIDEMIA	DYSLIPID	NUMERIC	0=NO 1=YES	1
48	HYPERTENSION	HYPERTEN	NUMERIC	0=NO 1=YES	1

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FILE LAYOUT

ITEM NUMBER	FIELD DESCRIPTION	FIELD NAME	FIELD TYPE	ACCEPTABLE RESPONSE	FIELD WIDTH
D. HISTORY AND RISK FACTORS (CONTINUED)					
49	TOBACCO HISTORY	SMOKER	NUMERIC	0=NEVER 1=CURRENT 2=FORMER	1
50	PREVIOUS DIAGNOSTIC CATH	PRIORDIAG	NUMERIC	0=NO 1=YES	1
51	PREVIOUS PCI	PRIORPCI	NUMERIC	0=NO 1=YES	1
52	PREVIOUS PCI DATE	PCIDATE	DATE	MM/DD/YYYY	10
53	PREVIOUS CABG	PRIORCABG	NUMERIC	0=NO 1=YES	1
54	PREVIOUS CABG DATE	CABGDATE1	DATE	MM/DD/YYYY	10
55	PREV VALVE SURGERY	PRIORVALVE	NUMERIC	0=NO 1=YES	1
56	PREV CARDIAC TRANSPLANT	PRIORTRANS	NUMERIC	0=NO 1=YES	1
E. CURRENT CLINICAL STATUS					
57	CONGESTIVE HEART FAILURE (CURRENT)	CURRENTCHF	NUMERIC	0=NO 1=YES	1
58	NYHA CLASSIFICATION	NYHA	NUMERIC	1=CLASS I 2= CLASS II 3= CLASS III 4= CLASS IV	1
59	CARDIOGENIC SHOCK	CARDIOGEN	NUMERIC	0=NO 1=YES	1
60	HEMODYNAMICALLY STABLE	HEMOSTAB	NUMERIC	0=NO 1=YES	1
61	HYPOTENSION	HYPOTEN	NUMERIC	0=NO 1=YES	1
62	LAST CREATININE	CREATININE	NUMERIC	MG/DL NUMBER WITH 1 DECIMAL	4
63	OUTCOME OF TEST	NONINVOUT	NUMERIC	0=NONE (NO NON-INVASIVE TEST) 1=POSITIVE 2=NEGATIVE 3=EQUIVOCAL	1
64	VENTILATOR SUPPORT	VENTSUP1	NUMERIC	0=NO 1=YES	1
65	DEFIBRILLATON	DEFIB1	NUMERIC	0=NO 1=YES	1
66	ADMISSION SYMPTOM (SX) PRESENTATION	ADMSX	NUMERIC	0=NO SX 1=ATYPICAL CHEST PAIN 2=STABLE ANGINA 3=ACS: UNSTABLE ANGINA 4=ACS: NON-STEMI 5=ACS: STEMI	1
67	TIME SYMPTOM (SX) ONSET	TIMESX	NUMERIC	1= >0HRS - <=6HRS 2= >6HRS - <=12HRS 3= >12HRS - <=24HRS 4= >24HRS - <=48HRS 5= >48HRS - <=72HRS 6= >72HRS - <=7DAYS 7=SILENT MI	1

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FILE LAYOUT

ITEM NUMBER	FIELD DESCRIPTION	FIELD NAME	FIELD TYPE	ACCEPTABLE RESPONSE	FIELD WIDTH
F. CATH LAB VISIT					
68	PROCEDURE DATE	PROCDATE	DATE	MM/DD/YYYY	10
69	RIGHT HEART CATH	RHC	NUMERIC	0=NO 1=YES	1
70	LEFT HEART CATH	LHC	NUMERIC	0=NO 1=YES	1
71	CORONARY ANGIOGRAPHY	CORANG	NUMERIC	0=NO 1=YES	1
72	VENTRICULAR ANGIOGRAPHY	VENTANG	NUMERIC	0=NO 1=YES	1
73	OTHER ANGIOGRAPHY	OTHANG	NUMERIC	0=NO 1=YES	1
74	PCI	PCI	NUMERIC	0=NO 1=YES	1
75	FLUORO TIME	FLUORO	NUMERIC	0-60.0 MINUTES	3
	HEMODYNAMIC SUPPORT				
76	IABP	IABP	NUMERIC	0=NO 1=YES	1
77	IABP PLACEMENT TIMING	IABPTIME	NUMERIC	1=BEFORE LAB VISIT 2=DURING LAB VISIT 3=AFTER LAB VISIT	1
78	VASOPRESSORS/INOTROPES	VASOPRESS	NUMERIC	0=NONE 1=BEFORE LAB VISIT 2=DURING LAB VISIT 3=AFTER LAB VISIT	1
79	OTHER CLINICAL SUPPORT	OTHSUP	NUMERIC	0=NO 1=YES	1
	LV STATUS				
80	LV FUNCTION ASSESSED	LVASSESS	NUMERIC	0=NO 1=YES	1
81	LV WALL MOTION	LVWALL	NUMERIC	0=NORMAL 1=ABNORMAL	1
82	EJECTION PERCENT	EJPCT2	NUMERIC	1-99 (BLANK IF NOT ASSESSED)	3
83	VENTILATOR SUPPORT (IN LAB)	VENTSUP2	NUMERIC	0=NO 1=YES	1
84	DEFIBRILLATION (IN LAB)	DEFIB2	NUMERIC	0=NO 1=YES	1
G. DIAGNOSTIC CATH PROCEDURE					
85	OPERATOR LICENSE NUMBER	DLICNUM	TEXT	OPERATOR LICENSE NUMBER	10
86	OPERATOR LAST NAME	DLNAME	TEXT	OPERATOR LAST NAME	15
87	OPERATOR FIRST NAME	DFNAME	TEXT	OPERATOR FIRT NAME	10
88	CARDIAC CATH STATUS	CATHSTAT	NUMERIC	1=ELECTIVE 2=URGENT 3=EMERGENCY	1
89	VALVULAR HEART DISEASE	VALVDIS	NUMERIC	0=NO 1=YES	1
90	ARRHYTHMIA	ARRHYT	NUMERIC	0=NO 1=YES	1
91	OTHER CARDIAC INDICATIONS	OTHIND	NUMERIC	0=NONE 1=CONGEN HEART DISEASE 2=HEART FAILURE 3=CARDIOMYOPATHY 4=CARDIOMYOPATHY/ HEART FAILURE 5=OTHER	1
92	LM STENOSIS PERCENT	LMPCT	NUMERIC	0-100 (BLANK IF NOT ASSESSED)	3
93	PROXIMAL LAD STEN PCT	PROXPCT	NUMERIC	0-100 (BLANK IF NOT ASSESSED)	3
94	MID/DISTAL LAD STEN PCT	MIDDISPCT	NUMERIC	0-100 (BLANK IF NOT ASSESSED)	3
95	CIRC STENOSIS PERCENT	CIRCPCT	NUMERIC	0-100 (BLANK IF NOT ASSESSED)	3

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FILE LAYOUT

ITEM NUMBER	FIELD DESCRIPTION	FIELD NAME	FIELD TYPE	ACCEPTABLE RESPONSE	FIELD WIDTH
G. DIAGNOSTIC CATH PROCEDURE (CONTINUED)					
	INDICATIONS				
96	RCA STENOSIS PERCENT	RCAPCT	NUMERIC	0-100 (BLANK IF NOT ASSESSED)	3
97	RAMUS STEN PERCENT	RAMPCT	NUMERIC	0-100 (BLANK IF NOT ASSESSED)	3
98	PROX LAD GRFT STEN PCT	PROXGPCT	NUMERIC	0-100 (BLANK IF NOT ASSESSED)	3
99	MID/DISTAL LAD GRAFT STENOSIS PERCENT	MIDDISGPCT	NUMERIC	0-100 (BLANK IF NOT ASSESSED)	3
100	CIRC GRAFT STEN PCT	CIRCGPCT	NUMERIC	0-100 (BLANK IF NOT ASSESSED)	3
101	RCA GRAFT STEN PCT	RCAGPCT	NUMERIC	0-100 (BLANK IF NOT ASSESSED)	3
102	RAMUS GRAFT STEN PCT	RAMGPCT	NUMERIC	0-100 (BLANK IF NOT ASSESSED)	3
	VALVE FINDINGS				
103	MITRAL INSUFFICIENCY	MVALVINSUF	NUMERIC	0=NONE 1=GRADE 1 2=GRADE 2 3=GRADE 3 4=GRADE 4 5=NOT ASSESSED	1
104	AORTIC STENOSIS	AVALVSTEN	NUMERIC	0=NO 1=YES 2=NOT ASSESSED	1
105	CALCULATED VALVE AREA	VALVAREA	NUMERIC	CM^2 (RANGE 0-5.0)	2
106	DOPPLER MEAN GRADIENT	DOPPMG	NUMERIC	mmHG (RANGE 10-150)	4
107	AORTIC INSUFFICIENCY	AVALVINSUF	NUMERIC	0=NONE 1=GRADE 1 2=GRADE 2 3=GRADE 3 4=GRADE 4 5=NOT ASSESSED	1
H. PCI PROCEDURE					
108	OPERATOR LICENSE NUMBER	PLICNUM	TEXT	OPERATOR LICENSE NUMBER	10
109	OPERATOR LAST NAME	PLNAME	TEXT	OPERATOR LAST NAME	15
110	OPERATOR FIRST NAME	PFNAME	TEXT	OPERATOR FIRT NAME	10
111	PCI STATUS	PCISTAT	NUMERIC	1=ELECTIVE 2=URGENT 3=EMERGENCY 4=SALVAGE	1
	INDICATIONS				
112	ISCHEMIC SYMPTOMS	AMI	NUMERIC	0=NO 1=YES	1
113	ST SEGMENT ELEVATION	STELEV	NUMERIC	0=NO 1=YES	1
114	UNINTERPRETABLE ECG	ECG	NUMERIC	0=NO 1=YES	1
115	STENOSIS PERCENT OF LEFT MAIN	PRCTSTEN	NUMERIC	0-100 (BLANK IF NOT ASSESSED)	3
116	LEFT MAIN UNPROTECTED	UNPROT	NUMERIC	0=NO 1=YES	1
117	LESION>=50%	LESGTE50	NUMERIC	0=NO 1=YES-DE NOVO 2=YES-RESTENOSIS 3=YES-DE NOVO/RESTENOSIS 4=YES-SUBACUT THROMBOSIS	1

Note: 'Field Width' for numeric and date fields is provided only as a guide to number of digits expected.

APPENDIX D

THE NEW JERSEY CARDIAC CATHETERIZATION DATA REGISTRY, VERSION 2.0

FILE LAYOUT

ITEM NUMBER	FIELD DESCRIPTION	FIELD NAME	FIELD TYPE	ACCEPTABLE RESPONSE	FIELD WIDTH
H. PCI PROCEDURE (CONTINUED)					
118	ACUTE PCI	ACUTEPCI	NUMERIC	0=NO 1=YES-PRIMARY PCI STEMI 2=YES-RESCUE PCI 3=YES-FACILITATED PCI 4=YES-NON STEMI/UNSTABLE ANGINA	1
119	SYMPTOM ONSET DATE	SODATE	DATE	MM/DD/YYYY	10
120	SYMPTOM ONSET TIME	SOTIME	TIME	MILITARY TIME (HH:MM FORMAT)	5
121	ARRIVAL DATE	ARRDATE	DATE	MM/DD/YYYY	10
122	ARRIVAL TIME	ARRTIME	TIME	MILITARY TIME (HH:MM FORMAT)	5
123	TRANSFER IN FOR PCI	TRANSINPCI	NUMERIC	0=NO 1=YES	1
124	ED PRESENTATION DATE	EDDATE	DATE	MM/DD/YYYY	10
125	ED PRESENTATION TIME	EDTIME	TIME	MILITARY TIME (HH:MM FORMAT)	5
126	REPERFUSION DATE	REPERDATE	DATE	MM/DD/YYYY	10
127	REPERFUSION TIME	REPERTIME	TIME	MILITARY TIME (HH:MM FORMAT)	5
128	TRANSFER OUT FOR CABG	TRANOUTCAB	NUMERIC	0=NO 1=YES	1
129	CALL TO SURG CTR DATE	CALLDATE	DATE	MM/DD/YYYY	10
130	CALL TO SURG TIME	CALLTIME	TIME	MILITARY TIME (HH:MM FORMAT)	5
131	LEFT ORIG HOSP DATE	OHDATE	DATE	MM/DD/YYYY	10
132	LEFT ORIG HOSP TIME	OHTIME	TIME	MILITARY TIME (HH:MM FORMAT)	5
133	ARRIVE AT REC HOSP DATE	RHDATE	DATE	MM/DD/YYYY	10
134	ARRIVE AT REC HOSP TIME	RHTIME	TIME	MILITARY TIME (HH:MM FORMAT)	5
135	ARRIVE AT OR DATE	ORDATE	DATE	MM/DD/YYYY	10
136	ARRIVE AT OR TIME	ORTIME	TIME	MILITARY TIME (HH:MM FORMAT)	5
I. LESIONS/DEVICES					
137	TOTAL NUMBER OF LESIONS	LESIONS	NUMERIC	1-9	1
138	SEGMENT NUMBER	SEGNUM1	TEXT	0-29A	3
139	PERCENT PRE STENOSIS	PCTPRESTN1	NUMERIC	0-100 (BLANK IF NOT ASSESSED)	3
140	PERCENT POST STENOSIS	PCTPSTSTN1	NUMERIC	0-100 (BLANK IF NOT ASSESSED)	3
141	PRE PROC TIMI FLOW	PRETIMI1	NUMERIC	0=NO 1=SLOW 2=PARTIAL 3=COMPLETE	1
142	POST PROC TIMI FLOW	POSTTIMI1	NUMERIC	0=NO 1=SLOW 2=PARTIAL 3=COMPLETE	1
143	PREV LESION TREATED	PTLES1	NUMERIC	0=NO 1=YES	1
144	PREV TREATED BALLOON	PTBALL1	NUMERIC	0=NO 1=YES	1
145	PREV TREATED STENT	PTSTENT1	NUMERIC	0=NO 1=YES-DES 2=YES-NON DES	1
146	PREV TREATED RADIATION	PTRAD1	NUMERIC	0=NO 1=YES	1
147	PREV TREATED OTHER	PTOTH1	NUMERIC	0=NO 1=YES	1
148	PREV TREATED DATE	PTDATE1	DATE	MM/DD/YYYY	10
149	SEGMENT IN GRAFT	SEGGRFT1	NUMERIC	0=NO 1=YES-VEIN GRAFT 2=YES-ARTERY GRAFT	1

Note: 'Field Width' for numeric and date fields is provided only as a guide to number of digits expected.

APPENDIX D

THE NEW JERSEY CARDIAC CATHETERIZATION DATA REGISTRY, VERSION 2.0

FILE LAYOUT

ITEM NUMBER	FIELD DESCRIPTION	FIELD NAME	FIELD TYPE	ACCEPTABLE RESPONSE	FIELD WIDTH
I. LESIONS/DEVICES (CONTINUED)					
150	LOCATION IN GRAFT	LOCGRFT1	NUMERIC	1= AORTIC 2= BODY 3= DISTAL	1
151	LESION RISK	LESRISK1	NUMERIC	0=NON-HIGH/NON-C 1=HIGH/C	1
152	LESION LENGTH	LESLGTH1	NUMERIC	MILLIMETERS	3
153	BIFURCATION LESION	BIFURLES1	NUMERIC	0=NO 1=YES	1
154	INTRACORONARY DEVICE PRIMARY INDICATOR	INTRADEV1	NUMERIC	0=NO DEVICE DEPLOYED 1=BALLOON ONLY 2=DRUG ELUTING STENT ONLY 3=BARE METAL STENT ONLY 4=ROTATIONAL ATHERECTOMY ONLY 5=THROMBECTOMY ONLY 6=CUTTING BALLOON ONLY 7=BALLOON AND DRUG ELUTING STENT ONLY 8=BALLOON AND BARE METAL STENT ONLY 9=OTHER (SPECIFY) 10=UNSUCCESSFUL- BALLOON ONLY 11=UNSUCCESSFUL- DRUG ELUTING STENT ONLY 12=UNSUCCESSFUL- BARE METAL STENT ONLY 13=UNSUCCESSFUL - BALLOON AND DRUG ELUTING STENT ONLY 14=UNSUCCESSFUL - BALLOON AND BARE METAL STENT ONLY 15=UNSUCCESSFUL – OTHER (SPECIFY)	2
155	SPECIFY OTHER DEVICE	SPECDEV1	TEXT		20
156	NO REFLOW PHENOM	NOREFLOW1	NUMERIC	0=NO 1=YES	1
157	DISSECTION	DISSECT1	NUMERIC	0=NO 1=YES	1
158	ACUTE CLOSURE	CLOSURE1	NUMERIC	0=NO 1=YES	1
159	SUCCESSFUL REOPENING	REOPEN1	NUMERIC	0=NO 1=YES	1
160	PERFORATION	PERF1	NUMERIC	0=NO 1=YES	1
161	SEGMENT NUMBER	SEGNUM2	TEXT	0-29A	3
162	PERCENT PRE STENOSIS	PCTPRESTN2	NUMERIC	0-100 (BLANK IF NOT ASSESSED)	3
163	PERCENT POST STENOSIS	PCTPSTSTN2	NUMERIC	0-100 (BLANK IF NOT ASSESSED)	3
164	PRE PROC TIMI FLOW	PRETIMI2	NUMERIC	0=NO 1=SLOW 2=PARTIAL 3=COMPLETE	1
165	POST PROC TIMI FLOW	POSTTIMI2	NUMERIC	0=NO 1=SLOW 2=PARTIAL 3=COMPLETE	1
166	PREV LESION TREATED	PTLES2	NUMERIC	0=NO 1=YES	1
167	PREV TREATED BALLOON	PTBALL2	NUMERIC	0=NO 1=YES	1

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APPENDIX D

THE NEW JERSEY CARDIAC CATHETERIZATION DATA REGISTRY, VERSION 2.0

FILE LAYOUT

ITEM NUMBER	FIELD DESCRIPTION	FIELD NAME	FIELD TYPE	ACCEPTABLE RESPONSE	FIELD WIDTH
I. LESIONS/DEVICES (CONTINUED)					
168	PREV TREATED STENT	PTSTENT2	NUMERIC	0=NO 1=YES-DES 2=YES-NON DES	1
169	PREV TREATED RADIATION	PTRAD2	NUMERIC	0=NO 1=YES	1
170	PREV TREATED OTHER	PTOTH2	NUMERIC	0=NO 1=YES	1
171	PREV TREATED DATE	PTDATE2	DATE	MM/DD/YYYY	10
172	SEGMENT IN GRAFT	SEGGRFT2	NUMERIC	0=NO 1=YES-VEIN GRAFT 2=YES-ARTERY GRAFT	1
173	LOCATION IN GRAFT	LOCGRFT2	NUMERIC	1= AORTIC 2= BODY 3= DISTAL	1
174	LESION RISK	LESRISK2	NUMERIC	0=NON-HIGH/NON-C 1=HIGH/C	1
175	LESION LENGTH	LESLGTH2	NUMERIC	MILLIMETERS	3
176	BIFURCATION LESION	BIFURLES2	NUMERIC	0=NO 1=YES	1
177	INTRACORONARY DEVICE PRIMARY INDICATOR	INTRADEV2	NUMERIC	0=NO DEVICE DEPLOYED 1=BALLOON ONLY 2=DRUG ELUTING STENT ONLY 3=BARE METAL STENT ONLY 4=ROTATIONAL ATHERECTOMY ONLY 5=THROMBECTOMY ONLY 6=CUTTING BALLOON ONLY 7=BALLOON AND DRUG ELUTING STENT ONLY 8=BALLOON AND BARE METAL STENT ONLY 9=OTHER (SPECIFY) 10=UNSUCCESSFUL- BALLOON ONLY 11=UNSUCCESSFUL- DRUG ELUTING STENT ONLY 12=UNSUCCESSFUL- BARE METAL STENT ONLY 13=UNSUCCESSFUL - BALLOON AND DRUG ELUTING STENT ONLY 14=UNSUCCESSFUL - BALLOON AND BARE METAL STENT ONLY 15=UNSUCCESSFUL – OTHER (SPECIFY)	2
178	SPECIFY OTHER DEVICE	SPECDEV2	TEXT		20
179	NO REFLOW PHENOM	NOREFLOW2	NUMERIC	0=NO 1=YES	1
180	DISSECTION	DISSECT2	NUMERIC	0=NO 1=YES	1
181	ACUTE CLOSURE	CLOSURE2	NUMERIC	0=NO 1=YES	1
182	SUCCESSFUL REOPENING	REOPEN2	NUMERIC	0=NO 1=YES	1
183	PERFORATION	PERF2	NUMERIC	0=NO 1=YES	1
184	SEGMENT NUMBER	SEGNUM3	TEXT	0-29A	3
185	PERCENT PRE STENOSIS	PCTPRESTN3	NUMERIC	0-100 (BLANK IF NOT ASSESSED)	3
186	PERCENT POST STENOSIS	PCTPSTSTN3	NUMERIC	0-100 (BLANK IF NOT ASSESSED)	3

Note: ‘Field Width’ for numeric and date fields is provided only as a guide to number of digits expected.

APPENDIX D

THE NEW JERSEY CARDIAC CATHETERIZATION DATA REGISTRY, VERSION 2.0

FILE LAYOUT

ITEM NUMBER	FIELD DESCRIPTION	FIELD NAME	FIELD TYPE	ACCEPTABLE RESPONSE	FIELD WIDTH
I. LESIONS/DEVICES (CONTINUED)					
187	PRE PROC TIMI FLOW	PRETIMI3	NUMERIC	0=NO 1=SLOW 2=PARTIAL 3=COMPLETE	1
188	POST PROC TIMI FLOW	POSTTIMI3	NUMERIC	0=NO 1=SLOW 2=PARTIAL 3=COMPLETE	1
189	PREV LESION TREATED	PTLES3	NUMERIC	0=NO 1=YES	1
190	PREV TREATED BALLOON	PTBALL3	NUMERIC	0=NO 1=YES	1
191	PREV TREATED STENT	PTSTENT3	NUMERIC	0=NO 1=YES-DES 2=YES-NON DES	1
192	PREV TREATED RADIATION	PTRAD3	NUMERIC	0=NO 1=YES	1
193	PREV TREATED OTHER	PTOTH3	NUMERIC	0=NO 1=YES	1
194	PREV TREATED DATE	PTDATE3	DATE	MM/DD/YYYY	10
195	SEGMENT IN GRAFT	SEGGRFT3	NUMERIC	0=NO 1=YES-VEIN GRAFT 2=YES-ARTERY GRAFT	1
196	LOCATION IN GRAFT	LOCGRFT3	NUMERIC	1= AORTIC 2= BODY 3= DISTAL	1
197	LESION RISK	LESRISK3	NUMERIC	0=NON-HIGH/NON-C 1=HIGH/C	1
198	LESION LENGTH	LESLGTH3	NUMERIC	MILLIMETERS	3
199	BIFURCATION LESION	BIFURLES3	NUMERIC	0=NO 1=YES	1
200	INTRACORONARY DEVICE PRIMARY INDICATOR	INTRADEV3	NUMERIC	0=NO DEVICE DEPLOYED 1=BALLOON ONLY 2=DRUG ELUTING STENT ONLY 3=BARE METAL STENT ONLY 4=ROTATIONAL ATHERECTOMY ONLY 5=THROMBECTOMY ONLY 6=CUTTING BALLOON ONLY 7=BALLOON AND DRUG ELUTING STENT ONLY 8=BALLOON AND BARE METAL STENT ONLY 9=OTHER (SPECIFY) 10=UNSUCCESSFUL- BALLOON ONLY 11=UNSUCCESSFUL- DRUG ELUTING STENT ONLY 12=UNSUCCESSFUL- BARE METAL STENT ONLY 13=UNSUCCESSFUL - BALLOON AND DRUG ELUTING STENT ONLY 14=UNSUCCESSFUL - BALLOON AND BARE METAL STENT ONLY 15=UNSUCCESSFUL – OTHER (SPECIFY)	2

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APPENDIX D

THE NEW JERSEY CARDIAC CATHETERIZATION DATA REGISTRY, VERSION 2.0

FILE LAYOUT

ITEM NUMBER	FIELD DESCRIPTION	FIELD NAME	FIELD TYPE	ACCEPTABLE RESPONSE	FIELD WIDTH
I. LESIONS/DEVICES (CONTINUED)					
201	SPECIFY OTHER DEVICE	SPECDEV3	TEXT		20
202	NO REFLOW PHENOM	NOREFLOW3	NUMERIC	0=NO 1=YES	1
203	DISSECTION	DISSECT3	NUMERIC	0=NO 1=YES	1
204	ACUTE CLOSURE	CLOSURE3	NUMERIC	0=NO 1=YES	1
205	SUCCESSFUL REOPENING	REOPEN3	NUMERIC	0=NO 1=YES	1
206	PERFORATION	PERF3	NUMERIC	0=NO 1=YES	1
J. ADVERSE OUTCOMES PRIOR TO DISCHARGE					
	GENERAL COMPLICATIONS				
207	PERIPROCEDURAL MI	CPERIMI	NUMERIC	0=NO 1=YES	1
208	CARDIOGENIC SHOCK	CCARDIOGEN	NUMERIC	0=NO 1=YES	1
209	CHF	CCHF	NUMERIC	0=NO 1=YES	1
210	CVA/STROKE	CCVA	NUMERIC	0=NO 1=YES	1
211	TAMPONADE	CTAMP	NUMERIC	0=NO 1=YES	1
212	THROMBOCYTOPENIA	CTHROM	NUMERIC	0=NO 1=YES	1
213	CONTRAST REACTION	CCONTRAST	NUMERIC	0=NO 1=YES	1
214	RENAL FAILURE	CRENALF	NUMERIC	0=NO 1=YES	1
215	EMERGENCY PCI	CEMGPCI	NUMERIC	0=NO 1=YES	1
216	TIA	CTIA	NUMERIC	0=NO 1=YES	1
217	SEPSIS	CSEPSIS	NUMERIC	0=NO 1=YES	1
218	ARRHYTHMIA	CARRHYT	NUMERIC	0=NO 1=YES	1
219	VENTILATOR SUPPORT	CVENTSUP	NUMERIC	0=NO 1=YES	1
	VASCULAR BLEEDING COMPLICATIONS				
220	ENTRY SITE BLEED	CENTRYSTBL	NUMERIC	0=NO 1=YES	1
221	RETROPERITONEAL BLEED	CRETROBL	NUMERIC	0=NO 1=YES	1
222	GASTROINTESTINAL BLEED	CGASTROBL	NUMERIC	0=NO 1=YES	1
223	GENITO-URINARY BLEED	CGUBL	NUMERIC	0=NO 1=YES	1
224	OTHER/UNKNOWN BLEED	COTHBL	NUMERIC	0=NO 1=YES	1
225	ACCESS SITE OCCLUSION	CACCOCC	NUMERIC	0=NO 1=YES	1
226	PERIPHERAL EMBOLIZATION	CPERIEMB	NUMERIC	0=NO 1=YES	1
227	DISSECTION	CDISSECT	NUMERIC	0=NO 1=YES	1
228	PSEUDOANEURYSM	CPSEUDOAN	NUMERIC	0=NO 1=YES	1
229	PSEUDOANEURYSM TREATMENT	CPSEUDOTRT	NUMERIC	0=NONE 1=PRESSURE 2=FIBRIN INJECTION 3=SURGERY	1
230	AV FISTULA	CAVFIST	NUMERIC	0=NO 1=YES	1

Note: 'Field Width' for numeric and date fields is provided only as a guide to number of digits expected.

APPENDIX D

THE NEW JERSEY CARDIAC CATHETERIZATION DATA REGISTRY, VERSION 2.0

FILE LAYOUT

ITEM NUMBER	FIELD DESCRIPTION	FIELD NAME	FIELD TYPE	ACCEPTABLE RESPONSE	FIELD WIDTH
K. DISCHARGE					
231	CABG STATUS	CABGSTAT	NUMERIC	0=NO CABG 1=ELECTIVE 2=URGENT 3=EMERGENCY 4=SALVAGE 5=TRANFERRED FOR CABG	1
232	CABG DATE	CABGDATE2	DATE	MM/DD/YYYY	10
233	BLOOD PRODUCTS	BLOODPROD	NUMERIC	0=NO 1=YES	1
234	DATE DISCHARGE	DATEDC	DATE	MM/DD/YYYY	10
235	DISCHARGE STATUS	MORTALITY	NUMERIC	1=ALIVE 2=DEAD	1
236	DATE DEATH	DATEDEATH	DATE	MM/DD/YYYY	10
237	CAUSE OF DEATH	CAUSEDEATH	NUMERIC	1=CARDIAC 2=NEUROLOGIC 3=RENAL 4=VASCULAR 5=INFECTION 6=PULMONARY 7=VALVULAR 8=UNKNOWN 9=OTHER	1
238	LOCATION OF DEATH	DEATHWHERE	NUMERIC	1=CATH LAB 2=HOSPITAL (NOT CATH LAB) 3=TRANSIT TO SURG CENTER 4=AT SURGERY CENTER	1
239	LOCATION DISCHARGE	DCWHERE	NUMERIC	0=NOT DISCHARGED 1=HOME 2=OTHER ACUTE CARE 3=REHAB/SUBACUTE 4=NURSING HOME 5=UNKNOWN 6=OTHER	1
	DISCHARGE MEDICATIONS				
240	ASPIRIN	DMEDASP	NUMERIC	0=NO 1=YES	1
241	BETA BLOCKER	DMEDBB	NUMERIC	0=NO 1=YES	1
242	COUMADIN	DMEDCOU	NUMERIC	0=NO 1=YES	1
243	PLATELET AGG INHIBITORS	DMEDPAI	NUMERIC	0=NO 1=YES	1
244	LIPID LOWERING AGENTS	DMEDLLA	NUMERIC	0=NO 1=YES	1
245	ACEI/ARB	DMEDACEI	NUMERIC	0=NO 1=YES	1
246	RESERVED 1	RESERVED1	NUMERIC	0-99	2
247	RESERVED 2	RESERVED2	NUMERIC	0-99	2
248	RESERVED 3	RESERVED3	TEXT		20

Note: 'Field Width' for numeric and date fields is provided only as a guide to number of digits expected.

APPENDIX E

New Jersey Department of Health and Senior Services
Office of Health Care Quality Assessment

QUARTERLY DATA SUBMISSION REPORT

This completed and signed form must accompany each quarterly data submission

Hospital Name: _____		**Hospital Code: _____**
Year of Data: _____ ❑ Q1 ❑ Q1 & Q2 ❑ Q1, Q2 & Q3 ❑ Q1, Q2, Q3 & Q4		**Number of Records Submitted:**
	❑ Low Risk Cardiac Catheterization	_____
	❑ Full Service Cardiac Catheterization Diagnostic Cases: Elective Interventions: Primary Interventions:	_____ _____ _____ _____
	❑ Open Heart Surgery	_____

Data submission prepared by:

_____ _____
Name Title

_____ _____
Signature Date

Serving as an official representative of the above hospital, I hereby certify that I have reviewed the data on the enclosed diskette and acknowledge that the data is an accurate and complete representation of all applicable cardiac procedures performed at the above named facility for the period noted. I acknowledge that the Department will be using this data as submitted and without further review and verification for purposes of licensure and certificate of need decisions as defined in NJAC 8:33E et seq. I understand that the Department will only accept data from my hospital with a senior administrator or medical director verifying the completeness and accuracy of the data.

Medical Director/Senior Administrator:

_____ _____
Name Title

_____ _____
Signature Date

Comments: