Percutaneous Coronary Intervention Report

Form DOH-3331

Instructions and Data Element Definitions
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Revision Highlights and Coding Clarification

New Data Elements

Please note several new elements have been added to the PCIRS data collection effective January 2004. The definitions for these elements are provided in the main text of this document.

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- Door to Balloon Time (page 17)
- Creatinine in mg/dl (page 19)
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Revised Data Elements

- Creatinine will be collected as a continuous variable of highest pre-procedure Creatinine (in mg/dl) recorded during this hospital admission. This will replace Risk Factor 23 – "Renal Failure Creatinine > 2.5".
- Risk Factor 8 – "Stroke" and Risk Factor 9 – "Carotid/Cerebrovascular Disease" have been combined into one data element; Risk Factor 9 – "Cerebrovascular Disease." (page 21)
- Risk Factor 10 – "Aortoiliac" and Risk Factor 11 – "Femoral/Popliteal Disease" have been combined into one data element; Risk Factor 10 – "Peripheral Vascular Disease." (page 21)

Data Element Clarifications

- As a reminder, two new device codes were added in 2003. They are:
  12 – Mechanical Thrombus Extraction (Attachment F and page 15)
  98 – Failed PCI, No Device Used (Attachment F and page 15)

- Acute MI section:
  All information collected in this section should be limited to patients who have a documented MI within 24 hours prior to the PCI. -

  Even though the Post-PCI information is no longer reported on the PCIRS form, the Cardiac Advisory Committee recommendations regarding enzyme monitoring remain unchanged.

Data Element Clarifications (Cont.)

- If a patient is Ventricular Assist Device (VAD) dependent then Risk Factor13 - "Shock" can be coded.

Deleted Data Elements

- Lesion Type (on the Lesion Specific grid)
- Ejection Fraction Calculated/Estimated/Unknown
- Risk Factor 8 – Stroke
- Risk Factor 9 – Carotid/Cerebrovascular
- Risk Factor 10 – Aortoiliac
- Risk Factor 11 – Femoral/Popliteal
- Risk Factor 33 – CPR
- Risk Factor 14 – More than one Previous MI
- Risk Factor 15 – Hypertension
- Risk Factor 23 – Renal Failure, Creatinine > 2.5
- Risk Factor 26 – IABP required at start of procedure
- Risk Factor 30 – Smoking history in past 2 weeks
- Risk Factor 31 – Smoking history in past year

ITEM-BY-ITEM INSTRUCTIONS

PFI Number

The PFI Number is a Permanent Facility Identifier assigned by the Department of Health. Enter your facility's PFI Number as shown in Attachment A.

Sequence Number

If your facility assigns a sequence number to each case on a chronological flow sheet or similar log, enter the sequence number here. The sequence number is not required for the Percutaneous Coronary Interventions Reporting System, but has been included on the form in case your facility finds it useful in identifying and tracking cases.

I. Patient Information

Patient Name

Enter the patient's last name followed by his/her first name.

Medical Record Number

Enter the patient's medical record number.

Social Security Number

Enter the patient's social security number as shown in the medical record. If the medical record does not contain the patient's social security number, leave this item blank.

This information can usually be found on the face sheet of the hospital medical record.

Age in Years

Enter the patient's age at admission to the hospital. The age should be calculated by subtracting the Date of Birth from the Hospital Admission Date.

I. Patient Information (Cont.)

Date of Birth

Enter the patient's exact date of birth.

Sex

Check the appropriate box.

Ethnicity

Check the appropriate box.

Race

Check the appropriate box. For White Hispanics, check "White"; for Black Hispanics, check "Black."

1. White. A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

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

3. Native American / American Indian or Alaska Native. A person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment.

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

5. Native Hawaiian or Other Pacific Islander. A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

8. Other. Report for those responses that are not covered by an above category or in cases where more than one of the above responses could be coded. Please provide the specific race for any case marked “Other.”

The PCIRS race codes are parallel to SPARCS race categories and are based on CDC codes that follow guidelines for minimum race and ethnicity categories as established for Federal programs by the Office of Management and Budget (OMB). More information on these reporting categories and the process of developing them can be found at www.whitehouse.gov/omb/fedreg/ombdir15.html .

I. Patient Information (Cont.)

Residence Code

Enter the county code of the patient's principal residence, as shown in Attachment B. If the patient lives outside New York State, use code 99 and print the name of the state or country where the patient resides in the space provided. If you enter a valid NYS County Code then the “State or Country” field may be left blank.

If the patient is from a foreign country, but is staying in the US during the pre-operative and post-operative time period, you must enter 99 and print the name of the country that the patient is from. Do not enter the residence code of where the patient is staying in the US.

Hospital Admission Date

Enter the date that the current hospital stay began.

Primary Payer

Enter the primary source of payment for this hospital stay as shown in Attachment C.

Medicaid

Check this box if the patient has Medicaid that will provide payment for any portion of this hospital admission. If the patient’s primary payer is Medicaid, check this box in addition to entering “03” or “04” under Primary Payer.

II. Procedural Information

Hospital that Performed Diagnostic Cath

If the angioplasty was preceded by a diagnostic catheterization, enter the name and PFI number of the hospital in the space provided. If the catheterization was at a cardiac diagnostic center in New York State, enter its PFI Number from Attachment A; if done at a Veterans Administration hospital in New York State, enter "8888"; if done outside New York State, enter "9999". If there was no diagnostic catheterization, leave this item blank.

Primary Physician Performing PCI

Enter the name and license number of the primary physician who performed the PCI.

Date of PCI

Enter the date on which the PCI was performed.

Time at Start of Procedure

Report the time that the first balloon was inflated or when the first stent was deployed. It should be reported using military time (i.e. 1:00 am is 01:00, and 1:00 pm is 13:00).

Interpretation

In the case of an attempted PCI when no balloon or stent can be deployed, report the time at the start of the procedure (the time that the guidewire leaves the catheter).

Diagnostic Cath During Same Lab Visit

If a **full** diagnostic catheterization was performed during the same cath lab visit as the PCI, then check "Yes". Otherwise check "No".

Interpretation

This does NOT include the case where there was a "quick look" done on the vessel to have the intervention. The diagnostic cath does not have to be every vessel, but should be a complete diagnostic of the area of interest.

Previous PCI This Admission

For patients who have had a *previous* PCI during this admission, check "Yes".

Otherwise check "No".

Interpretation:

If **YES,** it is very important that you enter the date of this procedure. It is this date that aids in combining multiple procedures from the same hospital admission in the proper order. This becomes especially important when determining Emergency/Non-Emergency status, since certain risk factors are only "credited" if they occur *prior* to the first procedure in a hospital admission.

PCI Prior to This Admission at this Hospital

For patients who have had a PCI prior to this admission at this hospital, check "Yes" and report the date of this previous procedure. If only the month and year are known, use 01 for the day and write in the correct month and year. If only the year is known, write in 01 for both the month and day then the correct year.

II. Procedural Information (Cont.)

Procedure Related Medicines

Check ALL that apply.

Fractionated Heparin
Administered 6 hrs pre-proc or anytime post-PCI

Includes low molecular weight heparin.
e.g., Lovenox, Fragmin, and Innohep.

Un-Fractionated Heparin
Administered 6 hrs pre-proc or anytime post-PCI

Direct Thrombin Inhibitors
Administered 6 hrs pre-proc or anytime post-PCI

e.g., Refludan, Argatroban, and Angiomax

If IV GPIIbIIIa Platelet Inhibitors
Administered 6 hrs pre-proc or anytime post-PCI

Check the appropriate box to indicate which IV GPIIbIIIa Platelet Inhibitor was used.

If more than one is given, check the one that was given *first*.

If one of these is checked, the Indication for Use of IV GPIIbIIIa Platelet Inhibitors MUST also be checked.

Indications for the Use of IV GPIIbIIIa Platelet Inhibitors

Please mark the appropriate box, to indicate the reason for giving the first dose of Abciximab or any other IV GPIIbIIIa Platelet Inhibitor.

1 – Angiographic Evidence
2 – Clinical Evidence
3 – Standard Practice/ Prophylactic
4 – Another Reason

The indication checked should be the primary reason for giving the *first* dose of *any* IV GPIIbIIIa Platelet Inhibitor.

If IV GPIIbIIIa Platelet Inhibitors were NOT given, leave Blank.

Timing for the Use of IV GPIIbIIIa Platelet Inhibitors

Please mark the appropriate box, to indicate the timing that the Abciximab or any other IV GPIIbIIIa Platelet Inhibitor was given.

1 – Pre
2 – Post
3 – Both

Thrombolytics

Check the appropriate box to indicate if, and at what time interval, thrombolytics were administered.

If thrombolytics were not administered because they were Contraindicated, check “Contraindicated”.

Interpretation:
A single bolus of heparin at the start of the intervention should not be reported.

II. Procedural Information (Cont.)

Procedure Related Medicines (cont.)

Interpretation of Indications and Timing for Use of IV GPIIbIIIa Platelet Inhibitors:
This section applies to the timing and reason for giving IV GPIIbIIIa Platelet Inhibitors.

If the medicine was given for more than one of the following reasons, check the one that occurred first. For example, if it was given before the intervention based on angiographic evidence and after the start of the procedure due to clinical decompensation, you would code the following: Indication = 1 -- Angiographic Evidence (because that was the first reason) and Timing = 3 -- Both (because it was given pre and post-PCI).

Mark "Pre" if the drug was started before the start of the procedure (before the guidewire leaves the catheter). Mark "Post" if used only during and/or after the procedure. Mark "Both" if the drug was used both "Pre" and "Post". If the drug is started after the start of the procedure, even if it was ordered before the start of the procedure, mark "Post."

Some examples of the types of indications include:
Angiographic Evidence: Evidence of intra-luminal thrombus (defined as: presence of filling defect within the coronary lumen, surrounded by contrast material, seen in multiple projections; persistence of contrast material (staining) of the lumen; a hazy lesion; visible embolization of intra luminal material downstream); High-risk lesions for PCI (B and C); Complication of low risk lesion (A); Acute occlusion at the site of PCI; Residual dissection at the site; Sub-optimal Results.

Clinical Evidence: Acute Coronary Syndrome (ACS) including patients with unstable angina, non ST- elevation MI, and ST-elevation MI; Acute MI requiring primary angioplasty; Instability occurring during or after PCI (intractable angina, Acute MI, etc)

Standard Practice / Prophylactic: If given as standard practice or for prophylactic purposes.

Another Reason: Any indication not listed above.

III. Vessels Diseased and Lesion-Specific Information

Vessels Diseased

For each diseased vessel, check the appropriate box to indicate the percent diameter stenosis. Include all vessels diseased, even branches.

Interpretation:
Use the ranges listed below when the medical record describes the percent stenosis in the following ways:

MILD	= plaques to < 50%
MODERATE	= 50-70%
SEVERE	= > 70%

Vessels Diseased (cont.)

If the diseased segment of the native vessel is bypassed by an open artery or vein graft, DO NOT code as diseased. This vessel is revascularized.

If a vessel or branch is described as having “Mild” stenosis then the vessel would ***NOT*** be coded as diseased, since we only code 50-100% stenosis.

If the medical record reports 60-70% stenosis, then code 50-69%.

The Ramus Intermediate can be coded as the LAD or LCX.

ALWAYS take the highest stenosis reported for a vessel. If the medical record reports the Proximal RCA with a 70% lesion and the Distal RCA with a 50% you should code the RCA as 70-100%, since the Proximal RCA has a 70% lesion.

If the medical record only has documentation that states the LAD was stenosed, then code the Mid LAD and NOT the Proximal LAD.

IVUS Used

If Intravascular Ultrasound (IVUS) was used for any reason during the PCI, code “1 - Yes.” Otherwise code “2 - No.”

Lesion-Specific

Complete one line for each lesion for which PCI was attempted, and one line for each non-attempted lesion with diameter stenosis of 50% or more. If there are more than seven lesions, report the seven most significant.

Location

Enter the code indicating the location of the lesion, as shown in Attachment D.

For lesions in a "sequential" graft going to two of the major coronary systems, complete a separate line for each coronary artery jeopardized (*LAD, LCX, RCA*).

Bypassed (A or V)

If the lesion has been bypassed by a vein graft, enter "V."
If the lesion has been bypassed by an artery graft, enter "A."
If the lesion was not bypassed leave blank.

Bypass Stenosis

If the lesion has a vein or artery graft, use the following code to determine the level of stenosis found in the graft:

1. $\geq$ 70%
2. < 70%
3. Unknown

II. Vessels Diseased and Lesion-Specific Information (Cont.)

% Pre-Op Stenosis

Enter the pre-PCI percent diameter reduction.
Measurement with calipers is recommended.

Previous PCI

Use the following codes to indicate if the lesion is restenotic following a previously successful PCI.

0. No Previous PCI
1. No Restenosis
2. Restenosis, No Stent Previously Placed in the Vessel
3. Restenosis, Stent Previously Placed in the Vessel

Primary Device and Secondary Device

ANY attempt to cross a lesion with a guidewire constitutes attempted PCI.
As soon as the guidewire leaves the catheter there is an attempted PCI.

From the procedural code list in Attachment F, indicate the primary device used. If the device used is not found in Attachment F, use Device Code "99 – Other" and specify the device used.

If the lesion was not attempted, place a "0" under primary device.

If a secondary device was used, indicate the device used in the appropriate box.

The attending physician is responsible for determining the primary and secondary devices.

Stent

From the Stent code list in Attachment F, indicate the type of stent used. If the stent used is not found in Attachment F, use Device Code "9 – Other" and specify the type of stent used.

Radiation

Check if **ANY** radiation was placed in the vessel regardless of the source.

% Post-Op Stenosis

If a PCI was attempted on this lesion, enter the percent diameter of the stenosis immediately following the PCI.

Measurement with calipers is recommended.

If PCI was not attempted, leave post-op stenosis blank.

Interpretation:

Brachytherapy should be coded as whatever Primary Device was used to open the vessel (e.g. "1-Balloon", "5 – Cutting Balloon"), Secondary Device "10 – Brachytherapy Catheter", and Radiation Code 1. If the radiation is delivered in a separate Cath Lab visit and no device was used to open the vessel code Primary Device "10 – Brachytherapy Catheter" and Radiation Code "1".

Secondary device should never be coded if the Primary Device field is left blank.

Lesion-Specific (cont.)

If the Medical Record says % Post-Stenosis was 0%, record it as 1% to indicate that it was actually a successful PCI and not left blank.

In the event of a failed PCI attempt, when the guidewire is advanced but no device is used, report the Device Code "98 – Failed PCI, No Device Used."

If a Balloon and a Stent are both used, it is at the discretion of the physician if the Balloon is coded as the Primary Device or not coded at all. For purposes of analysis/interpretation, the stent will be considered the primary or most important intervention for any such case.

Device Code "12 – Mechanical Thrombus Extraction" should be used to code Export Catheters or Extraction/Aspiration Devices when they are used independently of Distal Protection Devices.

IV. Acute MI Information

Complete this section for all patients with an MI less than 24 hours prior to the PCI.

NOTE: ONLY patients with Pre-Intervention Risk Factor #4-#6 should have information reported in this section. The following cardiac enzymes, EKG changes, and ischemic information should only be reported if they occurred up to 24 hours prior to PCI.

Cardiac Enzymes

Report results of pre-PCI cardiac enzyme measures.

Troponin may be used in place of the CK-MB iso-enzyme.

Interpretation:
The timing of the enzymes should be determined by when the blood was drawn NOT when it was processed by the lab.

CAC guidelines recommend one pre- and two post-PCI enzyme measures.

New Abnormal Wall Motion

Should be coded when abnormal wall motion is considered new and persisting as determined by EKG, ECHO or Nuclear Medicine.

Interpretation:
You would code new abnormal wall motion in the following scenario:

> In the absence of baseline studies with NO reasonable clinical evidence of a previous MI, if the ventriculogram shows hypokinesis and/or akinesis, and the patient is in the Acute Phase of an MI.

IV. Acute MI Information (Cont.)

New Q Waves

Defined as 0.03 seconds in width and/or > one third of the total QRS complex in two or more continuous leads.

New ST Elevation

> 1mm in two or more continuous leads.

New ST ↓ or T ↓

New Ischemic changes on EKG appearing as ST depression, T-Wave inversion, or both.

New Left Bundle Branch Block (LBBB)

Should be coded when LBBB is considered new and persisting as evidenced by EKG.

TIMI ≤ II

Evidence of TIMI flow ≤ II **WITH** either total vessel occlusion or a high-grade lesion.

Ischemic Type Chest Pain

Characteristics of ischemic type chest pain for > 20 minutes and not relieved by Nitroglycerin.

Characteristics of ischemic type chest pain can have a surrogate when associated with the cardiac event. Some equivalents would include but are not limited to: pain in the arm, shoulder, back, or jaw.

Ongoing Ischemia at Time of Procedure

Check this box if the patient is experiencing chest pain and acute ST or T-Wave changes at the start of the PCI.

IV. Acute MI Information (Cont.)

Door to Balloon Time

Enter the number of hours and minutes from the time the patient is first assessed in the hospital until first balloon inflation or stent deployment.

Time from Onset of Chest Pain to Procedure

Report in hours. Round to the nearest half hour.

For example, a patient report of 1¼ hr, would be reported as 1.5 and a patient report of 2 hrs 10 minutes would be reported as 2.0.

If greater than 99.9 hours, report 99.9.

NOTE: This is the only data element in this section that is reportable for more than 24 hours Pre-PCI. The time reported here should be the time from the onset of chest pain that brought the patient to the hospital or caused them to seek care. If the chest pain has stopped before the start of the procedure, you can still report the number of hours since it started.

V. Pre-Intervention Risk Factors

Priority

Check the appropriate box.

Elective: All cases not classified as urgent or emergency as defined below.

Urgent: The patient is too ill or unstable to be discharged from the hospital, but is not classified as emergency as defined below.

Emergency: Patients requiring emergency procedures will have ongoing, refractory, unrelenting cardiac compromise, with or without hemodynamic instability.

Typical patients include those in arrest with CPR administered immediately prior to the procedure, shock, ongoing ischemia including rest angina, acute evolving MI or equivalent within 24 hours of procedure, and/or pulmonary edema requiring intubation.

Height

Enter the patient's height in centimeters (cm).

Centimeters = 2.54 x inches

Weight

Enter the patient's weight in kilograms (kg).

Kilograms = pounds (lbs) / 2.2

Ejection Fraction and Measure

Record the ejection fraction taken closest to the cardiac procedure. When a calculated measure is unavailable, the ejection fraction should be estimated visually from the ventriculogram or by echocardiography. If an ejection fraction is unavailable, enter "0" and enter "9 - Unknown" for measure.

Note: Intraoperative direct observation of the heart is ***NOT*** an adequate basis for a visual estimate of the ejection fraction.

Indicate how the Ejection Fraction was measured using one of the following:

1. LV Angiogram
2. Echocardiogram
3. Radionuclide Studies
4. Transesophageal Echocardiogram (TEE), this includes intra-operative
8. Other
9. Unknown

Interpretation:
Any ejection fraction that is well documented in the chart is acceptable, but give precedence to the one closest to the cardiac procedure.

An ejection fraction, that is described in the medical record as "Normal" should be considered 55%.

Any cases with a missing or "0" ejection fraction will be sent back to the centers during quarterly and/or annual data validation to verify accuracy of this data element.

Creatinine

Enter the patient's highest pre-procedure Creatinine (in mg/dl) recorded during this hospital admission.

Angina: CCS Functional Class

Enter the number (1-4) corresponding to the patient's Canadian Cardiovascular Society Functional Class, as defined below.

Canadian Cardiovascular Society (CCS) Functional Classification:

1. Class I — Ordinary physical activity, such as walking or climbing stairs, does not cause angina. Angina may occur with strenuous or rapid or prolonged exertion at work or recreation.

2. Class II — There is slight limitation of ordinary activity. Angina may occur with walking or climbing stairs rapidly, walking uphill, walking or stair climbing after meals or in the cold, in the wind, or under emotional stress, or walking more than two blocks on the level, or climbing more than one flight of stairs under normal conditions at a normal pace.

3. Class III — There is marked limitation of ordinary physical activity. Angina may occur after walking one or two blocks on the level or climbing one flight of stairs under normal conditions at a normal pace.

4. Class IV — There is inability to carry on any physical activity without discomfort; angina may be present at rest.

Note: The determination of functional class should be based on the typical level of exertion required to produce angina. For example, a single episode of anginal pain at rest does not qualify a patient as Class IV unless it is the initial episode of angina.

Angina Type

Enter the appropriate number (1 or 2) indicating the patient's angina type.

1. Stable — Angina without a change in frequency or pattern for the 6 weeks prior to this procedure.
   Angina is controlled by rest and/or oral or transcutaneous medications.

2. Unstable — Angina has increased in frequency during the last 6 weeks, including new onset.
   Angina is produced by less effort or provocation and occurring in a crescendo pattern.
   Angina can be experienced at rest and pain may last for longer periods of time and be more difficult to relieve.
   Includes progressive, rest, and variant.

Angina Type (cont.)

Interpretation:
NOTE: *Angina type should not be confused with CCS Class.* CCS is a "snapshot" of the level of activity which brings on the angina and does not consider the changes in pattern or intensity over time which are considered in the stable/unstable categorization. For example, new onset angina could be only a CCS Class II based on the level of activity associated with angina, but it is still "unstable." In a similar fashion, CCS class III angina, if it has not changed in intensity or pattern in 6 weeks, could be "stable."

0. None

None of the pre-operative risk factors listed below are present.

1-3. Previous PCIs

If the patient had one or more previous PCI, check the appropriate box to indicate the number of previous PCI's.

Include any interventions that occurred prior to this one during the current admission.

If there was a previous procedure this admission, please be sure that the date of the most recent PCI is indicated next to "Previous PCI This Admission" on the front of the form.

4-7. Previous MI (most recent)

If the patient had one or more myocardial infarctions before PCI, report the length of time since the ***most recent*** MI.

If less than 6 hours, check box "4".
If ≥6 - <12 hours, check box "5".
If ≥12 - <24 hours, check box "6".
If 24 hours or more, enter the number of days in the space provided next to "7".
If 21 days or more, enter "21".

9. Cerebrovascular Disease

A history of stroke, with or without residual deficit; angiographic or ultrasound demonstration of at least 50% narrowing in a major cerebral or carotid artery (common or internal); or previous surgery for such disease. A history of bruits or transient ischemic attacks (TIA) is not sufficient evidence of cerebrovascular disease.

Interpretation:

Cerebrovascular Disease	CODE	DO NOT CODE
1. Patient with TIA, vertigo per history & physical		X
2. Cerebral aneurysm and clipping residual deficit	X	
3. External Carotid Artery has > 50% stenosis		X
4. Internal or Common Carotid Artery has > 50% stenosis	X	

10. Peripheral Vascular Disease

Angiographic demonstration of at least 50% narrowing in a major Aortoiliac or Femoral/Popliteal vessel, previous surgery for such disease, absent femoral or pedal pulses, or the inability to insert a catheter or intra-aortic balloon due to iliac aneurysm or obstruction of the aortoiliac or femoral arteries.

Interpretation:

Peripheral Vasuclar Disease	CODE	DO NOT CODE
1. Tortuosity of the vessel alone		X
2. Tortuosity of the vessel with an inability to insert a catheter	X	
3. Abdominal Aortic Aneurysm (AAA)	X	
4. Aneurysm in the ascending or descending aorta	X	
5. History of aorto-bifemoral bypass	X	
6. Absence of femoral pulse on either the right or the left	X	
7. Diminished femoral pulse on either right or left or both		X
8. Claudication		X
9. A negative popliteal pulse alone (1+1- or 1-1+)		X
10. Palpable Dorsalis Pedis and Posterior Tibial pulses		X
11. If pulses are non-palpable, but is Dopplerable	X	
12. If Dorsalis Pedis and Posterior Tibial pulses are absent in the right or the left or both	X	
13. Below the knee amputation of one or both legs	X	
14. Inability to insert a catheter or IABP in femoral arteries	X	
15. At least 50% narrowing in a major femoral artery	X	

Hemodynamic Instability at Time of Procedure

Determined just prior to or at the commencement of the PCI (the guide-wire leaving the catheter). These patients have hypotension and low cardiac output. The administration of pharmacological or mechanical support ***MUST*** be documented in the patient's medical record. For purposes of reporting, the PCI ***does not*** constitute the mechanical support.

12. Unstable

The patient requires pharmacologic or mechanical support to maintain blood pressure or output.

Interpretation:

Unstable	CODE	DO NOT CODE
1. Patient on IV Nitroglycerin or IV Heparin		X
2. IABP inserted for pain control		X
3. Inability to place IABP because of tortuous and diseased vessels		X
4. Documented evidence of hypotension, with NO pharmacologic or mechanical support		X

When coding "Unstable", be careful of timing. It needs to be prior to or at the commencement of the PCI. Once the guide-wire has left the catheter any instability after that would not constitute the patient being coded "Unstable".

With *documented evidence of hypotension* (low B/P), an IABP would be considered mechanical support and the patient would be considered unstable.

Fluid replacement alone does not constitute hemodynamic support for documentation of "Unstable."

The procedure itself ***DOES NOT*** constitute mechanical support.

*Unstable **CANNOT** be coded with SHOCK.*

Key elements for documentation of "Unstable": 1) evidence of hypotension or low cardiac output and 2) administration of mechanical or pharmacological support.

13. Shock

Acute hypotension *(systolic blood pressure < 80 mmHg)* or low cardiac index *(< 2.0 liters/min/m^2)*, despite pharmacologic or mechanical support.

Interpretation:
If the patient is Ventricular Assist Device (VAD) dependent then "Shock" can be coded. The type of VAD (Right, Left, Bi) is not important.

When coding "Shock", be careful of timing. It needs to be prior to or at the commencement of the PCI. Once the guide-wire has left the catheter any factors that would constitute the patient being coded "Shock" would ***NOT*** matter.

*Shock **CANNOT** be coded with Unstable.*

Key elements for the documentation of "Shock" include: 1) documented acute hypotension (systolic blood pressure < 80 mmHg) or low cardiac index (< 2.0 liters/min/m^2), 2) mechanical or pharmacological support, and 3) persistent acute hypotension (systolic blood pressure < 80 mmHg) or low cardiac index (< 2.0 liters/min/m^2) subsequent to the mechanical or pharmacological support.

18. Congestive Heart Failure, Current

Within 2 weeks prior to the procedure, a physician has diagnosed CHF by one of the following:

- Paroxysmal nocturnal dyspnea (PND)
- Dyspnea on exertion (DOE) due to heart failure
- Chest X-Ray showing pulmonary congestion

NOTE: Pedal edema or dyspnea alone are ***NOT*** diagnostic. Patient should also have received diuretics, digoxin, or vascular therapy such as ace inhibitors.

Interpretation:

Congestive Heart Failure, Current	CODE	DO NOT CODE
1. Patient admitted to Hospital A, with CHF and then transferred to Hospital B (within 2 weeks)	X	
2. Hospital reports: Chest + for rales, treated with Lasix	X	
3. Patient with prior renal transplant, pending renal transplant with creatinine up to 5 and BUN-72. Renal failure would explain the bilateral pleural effusions and DOE. Lasix was used to treat fluid retention secondary to renal failure not CHF. CXR indicating "cannot rule out mild CHF" is pretty consistent with fluid overload due to Renal Failure.		X

19. Congestive Heart Failure, Past

Between 2 weeks to 6 months prior to the procedure, a physician has diagnosed CHF by one of the following:

- Paroxysmal nocturnal dyspnea (PND)
- Dyspnea on exertion (DOE) due to heart failure
- Chest X-Ray showing pulmonary congestion

NOTE: Pedal edema or dyspnea alone are ***NOT*** diagnostic. Patient should also have received diuretics, digoxin, or vascular therapy such as ace inhibitors.

20. Malignant Ventricular Arrhythmia

Recent (within the past 14 days) sustained ventricular tachycardia requiring electrical defibrillation or conversion with intravenous antiarrhythmic agents or ventricular fibrillation requiring electrical defibrillation. **Excludes** V-Tach or V-Fib occurring within 6 hours of the diagnosis of a myocardial infarction and responding well to treatment.

Interpretation:
If the patient has an AICD that is documented to have fired then ***CODE***, unless the patient has had an MI within the last 6 hours.

Regular oral medication for a ventricular arrhythmia is **NOT** sufficient reason to document the risk factor.

21. Chronic Obstructive Pulmonary Disease

Patients who:

- require chronic *(longer than three months)* bronchodilator therapy to avoid disability from obstructive airway disease, **Or**
- Have a forced expiratory volume in one second of less than 75% of the predicted value or less than 1.25 liters, **Or**
- Have a room air pO_2 <60 or a pCO_2 >50.

NOTE: COPD should not be checked unless the patient's medical record contains documentation of the above criteria, *regardless* of how much the patient may have smoked.

Interpretation:

COPD	CODE	DO NOT CODE
1. Chest X-Ray as documentation		X
2. Patient required bronchodilators prior to PCI		X
3. Fibrotic lungs on chest X-Ray		X
4. Hyperinflated lungs at intervention		X
5. Chart states asthma without medications		X
6. Sleep Apnea without any of the above criteria		X

22. Diabetes Requiring Medication

The patient is receiving either oral hypoglycemics or insulin.

Interpretation:
The following scenario ***WOULD NOT*** be coded since the medication was not ongoing:

> Patient admitted on 12/28. Nurses note on 12/29: "patient has no hx DM but had insulin (stat) in another hospital." Glucose level 155 on NO meds.

24. Renal Failure, Dialysis

The patient is on chronic peritoneal or hemodialysis.

Interpretation:
A single dialysis treatment ***DOES NOT*** constitute coding this risk factor.

28. Previous CABG Surgery

Previous coronary artery bypass graft (CABG) surgery.

Interpretation:
DO NOT code if it occurred during the same admission as the PCI in question.

If the patient has an "A" or "V" coded in the lesion specific section, then this variable should be coded UNLESS the grafting occurred during this admission.

29. Immune System Deficiency

Chronic use, that continues until surgery, of steroids, anti-neoplastic therapy, cyclosporine, or other immunosuppressive therapy **or** the presence of acute phase HIV/AIDS, acute Leukemia, or acute phase of other type of Immune System Disease.

32. Emergency PCI due to DX Cath Complication

Catheterization related dissection or obstruction of coronary artery during diagnostic catheterization, requiring immediate, unplanned angioplasty to treat closure or threatened closure of the vessel.

34. Stent Thrombosis

Formation of a blood clot/thrombus in the stented segment of the artery and/or adjacent area. This usually results in an acute occlusion, chest pain or development of an acute MI. Stent thrombosis usually occurs up to 30 days following the procedure.

Interpretation:
An occlusion alone or plaque build-up ***DOES NOT*** constitute coding.

The thrombus needs to be in or around the area that is stented for the risk factor to be coded.

35. Any Previous Organ Transplant

The patient has had any organ transplant **prior** to the PCI. This includes, but is not limited to, heart, lung, kidney, and liver transplants.

Interpretation:
Also code for bone marrow transplant.

Do not code for skin transplant (grafting).

VI. Major Events Following Intervention

Check to be sure that all of the listed major events occurred during or after the intervention. Check at least one box in this section.

Please Note: A *documented* pre-intervention risk factor that persists post-intervention with NO increase in severity is not a major event.

Unless otherwise specified, major events are ONLY reported if they occur during or after PCI, but before hospital discharge.

0. None

Check if none of the Major Events listed below occurred following the intervention.

VI. Major Events Following Intervention

1. Stroke (New Neurological Deficit) 24 hrs or less

Permanent new focal neurological deficit occurring either during the intervention or within 24 hrs Post-PCI.

Interpretation:
Exacerbation of a previous CVA with *No New Neurological Deficit* would ***NOT*** be coded.

Transient neurological deficits, such as TIA, are not reported as a Post-PCI event.

If the condition is still present at discharge, then the event should be reported.

1A. Stroke (New Neurological Deficit) over 24 hours

Permanent new focal neurological deficit occurring more than 24 hours Post-PCI.

Interpretation:
Exacerbation of a previous CVA with *No New Neurological Deficit* would ***NOT*** be coded.

Transient neurological deficits, such as TIA, are not reported as a Post-PCI event.

If the condition is still present at discharge, then the event should be reported.

2. Transmural MI (New Q Waves)

New Q waves and a rise in cardiac enzyme (CK) to at least 2.5 times the normal range, occurring within 24 hours after PCI.

3. Non-Transmural MI (No New Q Waves)

Utilize your hospital's clinical guidelines to determine a non-transmural MI, occurring within 24 hours after PCI.

7A. Acute Occlusion in the Targeted Lesion

Acute occlusion, complete or partial, in the targeted lesion resulting in reduction of flow through the dilated artery.

Usually caused by thrombosis, intimal flap, or dissection.

An occlusion which is reopened before the patient leaves the catheterization laboratory and stays open should **NOT** be reported.

7A. Acute Occlusion in the Targeted Lesion (cont.)

An occlusion requiring the patient's return to the catheterization laboratory **SHOULD** be reported even if the vessel is then reopened.

If the acute occlusion is caused by a stent thrombosis, ONLY code the stent thrombosis.

7B. Acute Occlusion in a Significant Side Branch

Acute occlusion, complete or partial, in a significant side branch resulting in reduction of flow.

This should include any occlusion in any location within the significant proximal or distal branches of the targeted or treated vessel.

Usually caused by thrombosis, intimal flap, or dissection.

An occlusion which is reopened before the patient leaves the catheterization laboratory and stays open should **NOT** be reported.

An occlusion requiring the patient's return to the catheterization laboratory **SHOULD** be reported even if the vessel is then reopened.

8. A/V Injury at Cath Entry Site, requiring intervention

Arterial or Venous injury requiring intervention, including, but NOT limited to:

- Those requiring femoral or brachial embolectomy
- Evacuation of a hematoma
- Repair of false aneurysm, *example: ultrasound guided compressions*
- Closure of arterial-venous fistula.

10. Renal Failure

Temporary or permanent renal dialysis of any type before hospital discharge.
Do not code this item if Risk Factor 24 (*Renal Failure, Dialysis*) is coded.

14. Emergency Cardiac Surgery

The patient is taken to the operating room for cardiac surgery on an emergency basis due to a complication of PCI.

Interpretation:
This major event should be reported for any cardiac surgery, not just those reportable in the NYS Cardiac Surgery Reporting System (CSRS). Examples of reportable surgeries include but are not limited to: CABG, cardiac massage, cardiac explorations.

VI. Major Events Following Intervention (Cont.)

17. Stent Thrombosis

Formation of a blood clot in the stented segment of the artery and/or adjacent area. This usually results in an acute occlusion, chest pain, or development of an acute MI. Stent thrombosis usually occurs within 30 days following the procedure.

NOTE: Stent Thrombosis should be reported as a major event even if it does not become apparent until after the patient is discharged from the hospital. **It should be reported if apparent up to 6 months post-intervention.**

Interpretation:
An occlusion alone or plaque build-up ***DOES NOT*** constitute coding.

The thrombus needs to be in or around the area that is stented for the major event to be coded.

18. Emergency Return to the Cath Lab for PCI

The patient is taken to the Cath Lab for PCI on an emergency basis due to a complication of a previous PCI.

VII. Discharge Information

Medications on Discharge

Aspirin

Check this box for all patients who received aspirin or dipyridamole. If the patient is allergic to aspirin this variable should be checked for all patients discharged on clopidogrel or ticlopidine.

Contraindication to Aspirin

Check this box for any patient who did not receive aspirin, clopidogrel, or ticlopidine on discharge because of any of the following conditions: allergy, active bleeding on arrival or during hospital stay, Warfarin/Coumadin prescribed at discharge, or other reasons documented by a physician, nurse practitioner, or physician's assistant in the medical chart.

VII. Discharge Information (Cont.)

Medications on Discharge (cont.)

Beta Blockers

Check this box for all patients discharged on beta blockers.

Contraindication to Beta Blockers

Check this box for any patient not discharged on beta blockers for any of the following conditions: allergy, bradycardia (heart rate less than 60 bpm) on day of or day before discharge and not on beta blockers, second or third degree heart block on ECG on arrival or during hospital stay and does not have a pacemaker, systolic blood pressure less than 90 mmHg on day of or day before discharge and not on beta blockers, or other reasons documented by a physician, nurse practitioner, or physician's assistant in the medical chart.

Low-density lipoprotein (LDL) cholesterol ≥ 100 mg/dl

Check this box for any patient with LDL ≥ 100 mg/dl on discharge.

Lipid Lowering Medication

Check this box for all patients who were discharged on a lipid lowering medication.

Contraindication to Lipid Lowering Medication

Check this box for all patients who have a contraindication to lipid lowering medications.

Discharge Status

Discharged Alive To

Check the appropriate box.

Patients discharged to Hospice (including Home with Hospice), code "12". NOTE: for purposes of analysis a hospice discharge ("12") is considered an in-hospital mortality.

VII. Discharge Information (Cont.)

Discharged Alive To (cont.)

If the patient came from a Prison or Institutional Facility and is being discharged back to the same setting then "11 – Home" would be coded.

If the patient is discharged to sub-acute rehab that is in a skilled nursing facility then the discharge status would be "14", if it is unknown where the sub-acute rehab facility is located then the discharge status would be "19".

If the patient is discharged to an inpatient physical medicine and rehabilitation unit the discharge status should be "15".

"19 – Other (specify)" should only be checked for a live discharge status not otherwise specified in this section (e.g. AMA).

Any discharge status "19" that does not specify where the patient was discharged to will be sent back to the hospital for verification.

Died in

Check the appropriate box.

If "8 – Elsewhere in Hospital" is checked, specify where the patient died.

Hospital Discharge Date

Enter 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.

VIII. Person Completing Report

This section is for hospital use only. It may be helpful to enter the name and telephone number of the person completing the report, and the date the report was completed.

ATTACHMENT A

PFI NUMBERS FOR CARDIAC DIAGNOSTIC AND SURGICAL CENTERS

PFI #	HOSPITAL
0001	Albany Medical Center Hospital
0116	Arnot Ogden Medical Center
1438	Bellevue Hospital Center
1439	Beth Israel Medical Center / Petrie Campus
1164	Bronx Lebanon Hospital Center – Fulton Division
1286	Brookdale Hospital Medical Center
0885	Brookhaven Memorial Hospital Medical Center, Inc.
1288	Brooklyn Hospital Center - Downtown
0207	Buffalo General Hospital
0977	Cayuga Medical Center at Ithaca
0135	Champlain Valley Physicians Hospital Medical Center
0208	Children's Hospital of Buffalo
1626	City Hospital Center at Elmhurst
1294	Coney Island Hospital
0636	Crouse Hospital
0829	Ellis Hospital
0210	Erie County Medical Center
0599	Faxton St. Luke’s Healthcare, St. Luke’s Division
1005	Glens Falls Hospital
0925	Good Samaritan Hospital Medical Center (West Islip)
0779	Good Samaritan Hospital of Suffern
1445	Harlem Hospital Center
0913	Huntington Hospital
1300	Interfaith Medical Center, Jewish Hosp. Med Ctr of Brooklyn Division
1165	Jacobi Medical Center
1629	Jamaica Hospital Medical Center
1450	Lenox Hill Hospital
1302	Long Island College Hospital
1630	Long Island Jewish Medical Center
1304	Lutheran Medical Center
1305	Maimonides Medical Center
0746	Mary Imogene Bassett Hospital
0213	Mercy Hospital of Buffalo
0215	Millard Fillmore Hospital
1169	Montefiore Medical Center – Henry and Lucy Moses Division
3058	Montefiore Medical Center – Jack D. Weiler Hosp. of A. Einstein College Div.
1456	Mount Sinai Hospital

ATTACHMENT A

PFI NUMBERS FOR CARDIAC DIAGNOSTIC AND SURGICAL CENTERS

PFI #	HOSPITAL
0528	Nassau University Medical Center
2968	North General Hospital
0541	North Shore University Hospital
1637	NY Hospital Medical Center of Queens
1306	NY Methodist Hospital
1464	NY Presbyterian Hospital Columbia Presbyterian Center
1458	NY Presbyterian Hospital NY Weill Cornell Center
1437	NYU Downtown Center
1463	NYU Hospitals Center
0066	Olean General Hospital
0471	Park Ridge Hospital
0411	Rochester General Hospital
0367	Samaritan Medical Center
0818	Saratoga Hospital
1072	Sound Shore Medical Center of Westchester
0527	South Nassau Communities Hospital
0924	Southside Hospital
1176	St. Barnabas Hospital
0943	St. Catherine of Siena Hospital
0598	St. Elizabeth Medical Center
0563	St. Francis Hospital
0870	St. James Mercy Hospital
0630	St. Joseph's Hospital Health Center
1469	St. Luke’s Roosevelt Hospital - St. Luke’s Hospital Division
1466	St. Luke’s Roosevelt Hospital Center, Roosevelt Hospital Division
0005	St. Peter's Hospital
1740	Staten Island University Hospital - North
0413	Strong Memorial Hospital
1634	SVCMC – St Johns Queens
1471	SVCMC - St. Vincent’s Manhattan
1738	SVCMC - St. Vincent’s Staten Island

ATTACHMENT A

PFI NUMBERS FOR CARDIAC DIAGNOSTIC AND SURGICAL CENTERS

PFI #	HOSPITAL
0058	United Health Services Hospital, Inc – Wilson Hospital Division
1320	University Hospital of Brooklyn
0245	University Hospital at Stony Brook
0635	University Hospital SUNY Health Science Center (Upstate)
0181	Vassar Brothers Hospital
1139	Westchester Medical Center
0511	Winthrop University Hospital
0103	Woman's Christian Association

8888 Catheterization Laboratory at a Veterans Administration Hospital in New York (for use in this reporting system; not an official Permanent Facility Identifier)

9999 Catheterization Laboratory Outside New York State (for use in this reporting system; not an official Permanent Facility Identifier)

ATTACHMENT B

Residence Codes

The county codes shown below are also used in the SPARCS Discharge Data Abstract:

01 Albany
02 Allegany
03 Broome
04 Cattaraugus
05 Cayuga
06 Chautauqua
07 Chemung
08 Chenango
09 Clinton
10 Columbia
11 Cortland
12 Delaware
13 Dutchess
14 Erie
15 Essex
16 Franklin
17 Fulton
18 Genesee
19 Greene
20 Hamilton
21 Herkimer
22 Jefferson
23 Lewis
24 Livingston
25 Madison
26 Monroe
27 Montgomery
28 Nassau
29 Niagara
30 Oneida
31 Onondaga
32 Ontario
33 Orange
34 Orleans
35 Oswego
36 Otsego
37 Putnum
38 Rensselaer
39 Rockland
40 St. Lawrence
41 Saratoga
42 Schenectady
43 Schoharie
44 Schuyler
45 Seneca
46 Steuben
47 Suffolk
48 Sullivan
49 Tioga
50 Tompkins
51 Ulster
52 Warren
53 Washington
54 Wayne
55 Westchester
56 Wyoming
57 Yates
58 Bronx
59 Kings
60 Manhattan
61 Queens
62 Richmond

88 Unknown

99 Outside NYS

ATTACHMENT C

PAYER CODES (CODE PRIMARY PAYER ONLY)

01 Medicare—Fee For Service
02 Medicare—Managed Care
03 Medicaid—Fee For Service
04 Medicaid—Managed Care
05 Blue Cross
06 HMO/Managed Care
07 Other Private Insurance Company
08 Worker's Compensation
09 Family Health Plus
10 Other Federal Program
11 Self Pay
19 Other

Codes for Location of Lesion

Use the list and diagram below to find the code for location of lesion.

1. Prox RCA
2. Mid RCA
3. Dist RCA
4. R PDA
5. RPLS
6. 1st RPL
7. 2nd RPL
8. 3rd RPL
9. Inf. Septal
10. Ac Marg
11. LMCA
12. Prox LAD *
13. Mid LAD
14. Dist LAD
15. 1st Diag or Intermediate Branch
16. 2nd Diag
17. 1st Septal
18. Prox CX
19. Dist CX
20. 1st Ob Marginal
21. 2nd Ob Marginal
22. 3rd Ob Marginal
23. L A V
24. 1st LPL
25. 2nd LPL
26. 3rd LPL
27. LPDA

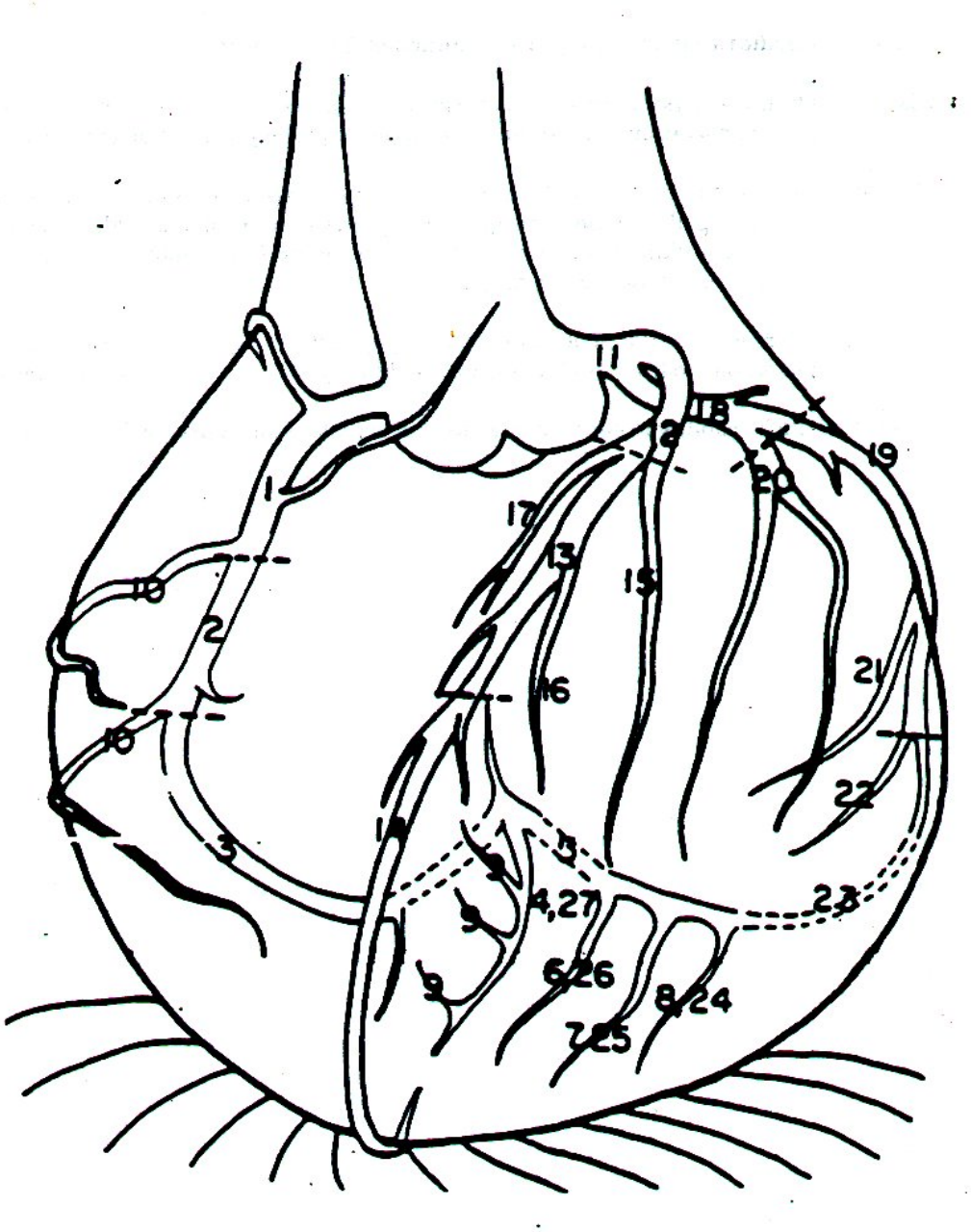
41. Vein Graft to LMCA
42. Artery Graft to LMCA

51. Vein Graft to LAD
52. Artery Graft to LAD

61. Vein Graft to LCX
62. Artery Graft to LCX

71. Vein Graft to RCA
72. Artery Graft to RCA

88. PTMR



* Code 12 refers to the region before the origin of the major septal artery.

ATTACHMENT F

Procedure/Device List

Use the following values to code procedures and/or devices used during the intervention.

Primary and Secondary Devices:

0 Lesion Not Attempted or No Device Used
1 Balloon
2 Directional Atherectomy
3 Rotational Atherectomy
4 Distal Protective Devices (Including Filter Wires)
5 Cutting Balloon
6 Laser
7 Transluminal Extraction Catheter (TEC)
8 PTMR
10 Brachytherapy Catheter
11 Angiojet
12 Mechanical Thrombus Extraction
98 Failed PCI – No Device Used
99 Other (Specify)

Stents:

0 No Stent Used
1 Un-Coated Stent
2 Covered Stent (membrane coated)
3 Heparin Coated Stent
4 Paclitaxel Coated Stent
5 Tacrolimus Coated Stent
6 Sirolimus Coated Stent
9 Other Coated Stent (Specify)