

Cardiac Surgery Report, Adult
(Age 18 and Over)
Form DOH-2254a

Instructions and Data Element Definitions
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Revision Highlights and Coding Clarification

New Data Elements

Please note two new elements have been added to the CSRS data collection system effective January 1, 2005. The definitions for these elements are provided in the main text of this document.

- PFI of Transferring Hospital (page 14)
- Time at the start of Procedure (page 15)

New Procedure Codes

Please note two new procedure codes have been added to the CSRS data collection system effective January 1, 2005. They can be found in Attachment D.

243 – Aortic Valve Replacement - Heterograft

724 – Ventricular Reconstruction done with a CABG

Please note that code 724 is for a ventricular reconstruction due to an acquired disease that is performed at the same time as a CABG. If it is a ventricular reconstruction due to a congenital anomaly done with a CABG use codes 360 and 760.

Deleted Data Element

The following data element has been deleted from the CSRS data collection system effective January 1, 2005.

- LDL \geq 100 mg/dl

Procedure Codes

CABG CODES: As a reminder, as started in 2004 a CABG is coded using a 670 and the data elements under CABG Information must be completed.

CODE THE FOLLOWING PROCEDURES ONLY WHEN THEY ARE PERFORMED IN THE SAME OPERATING ROOM VISIT AS A CABG: Carotid Endarterectomy (722) or Implantation of an AICD (723).

Revision Highlights and Coding Clarification (Cont.)

Procedure Codes (Cont.)

CSRS FORM REQUIRED:

When removal of a thymoma, cyst, adhesion, etc. is the only procedure performed in a hospital admission, code it as a 904 "Removal of Intracardiac Tumor", otherwise do not code.

When the following procedures are the ONLY cardiac procedure performed in a hospital admission code them as a 498 or 998, otherwise the procedures are NOT CODED.

Intra-Operative Removal of a Stent
Aortic Endarterectomy
Pulmonary Endarterectomy

During quarterly and annual data verification and validation efforts, we will be asking for supporting documentation for cases coded as 398, 498, or 998. Therefore, we highly recommend that at the time of coding you keep a copy of the operative note as supporting documentation in a place for easy retrieval at a later date.

DO NOT CODE:

Implantation or removal of a pacemaker and its leads or wires
Removal of an AICD and its leads or wires
Coronary Endarterectomies
Femoral Artery Repair or Bypass
Innominate Artery Bypass
Aortic Subclavian Bypass
Exploration of the atria, aorta, valves, ventricles, or pulmonary artery

Intra-Operative PCI: Code as a CABG (670). Then code CABG information using the following criteria: count this procedure as a distal anastomosis of the saphenous vein. Therefore, this procedure done in isolation should have 1 Total Conduit, 0 Arterial Conduits, and 1 Distal Anastomoses. This procedure, when performed with a single arterial graft should have 2 Total Conduits, 1 Arterial Conduit, and 2 Distal Anastomoses.

Repair of Cardiac Laceration due to Trauma (907): In addition to being coded when a laceration from trauma is repaired, this code should be used anytime there is a procedure being performed to repair an injury to the heart that has resulted from a cardiac diagnostic or interventional procedure or from cardiac surgery.

Revision Highlights and Coding Clarification (Cont.)

Procedure Codes (Cont.)

Radiofrequency or Operative Ablation (770-772): A 772 (Maze) should be coded when there is a surgical procedure (standard surgical maze procedure) in which full thickness incisions are made in the atria of the heart. Sutures are then used to reapproximate the incised tissue. The resulting lesion disrupts the abnormal reentry pathways of electronic signals that lead to atrial fibrillation.

Code 770 (Atrial) or 771 (Ventricle) should be used when lesions are created in the atria (or ventricle) by an energy source (radiofrequency, microwave, cryothermia, etc.). The lesion then disrupts the abnormal reentry pathways of electronic signals that can lead to fibrillation.

All procedures coded 772 will now require an operative note to verify coding.

Pericardiectomy (402): Any time the procedure consists of more than a pericardial window (i.e. stripping or partial pericardiectomy) **and** the procedure is performed on bypass it should be coded 402. A pericardial window is a small hole in the pericardium usually done by removing a small amount of the pericardial wall. It is usually done for a large or symptomatic collection of pericardial fluid or for diagnosis (biopsy).

Pulmonary Embolectomy (902): This should be coded if it is the **ONLY** cardiac procedure performed during the admission, otherwise **DO NOT** code.

Aortic Root, Replacement or Repair, With Graft, With Coronary Reimplantation (785): This code now only refers to procedures that involve the aortic root and an aortic valve repair/replacement. An Ascending Aorta, with Graft, With Coronary Reimplantation should be coded 780.

Aortic Valve Replacements: Do not code aortic root enlargements when performed with aortic valve replacements.

Bicuspid Aortic Valve: Should *always* be considered congenital and coded using congenital codes (240-243). If the valve is done in combination with another valve and/or a CABG, code the aortic valve using the appropriate type of valve as indicated (240-243) and then code the other valve and/or CABG using the appropriate acquired code. **DO NOT** use a combined code (ie. 610-638 or 740-747) when a bicuspid aortic valve is being operated on.

Valve Debridement: If a valve has had debridement, then a valve repair should be coded.

Ventricular Assist Device as a Destination Therapy (840): If an LVAD is placed as the final therapy code 840 in addition to the LVAD. For example, if the patient is not a candidate for a heart transplant, but an LVAD is placed as a long-term treatment option this code would be appropriate.

Revision Highlights and Coding Clarification (Cont.)

Patient Information

Race: Please see page 12 for a new clarification for how to determine race.

Primary Payer: Several codes have been combined to simplify reporting. A complete list of payer codes can be found in Attachment C.

Primary Payer and Medicaid: Please see page 13 for additional clarifications for these data elements.

Procedural Information

Primary Physician Performing Operation: please see new clarification on page 14.

IMA Grafting: see revised definition on page 17.

Within 24 hours Post-op

All variables in this section only need to be reported for patients who had a CABG, where post-op is defined as starting when the patient leaves the procedure room.

Extubation within 24 hours post-op: Code if the patient is extubated at 24 hours post-surgery. (page 17)

Contraindication to Extubation within 24 hours post-op: Please see page 17 for revised definition.

Pre-Op Surgical Risk Factors

CCS Class: A new option has been added: “8: None”. This should be used if the patient has no history of angina and includes those patients who do not have a history of angina but may present with chest pain associated with an MI.

Also, anginal equivalent symptoms (e.g. shortness of breath) may now be used to determine the CCS Class. (page 20)

Creatinine: If no pre-operative creatinine values are available from the current hospital stay, it is acceptable to use values found during Pre-Admission Testing (up to 2 weeks prior to the surgery). If the patient is transferred, the creatinine can come from the transferring hospital. (page 20)

Vessels Diseased: If the medical record reports “40-50%” stenosis, then DO NOT CODE as diseased. (page 21)

Revision Highlights and Coding Clarification (Cont.)

Pre-Op Surgical Risk Factors (Cont.)

Previous MI < 24 hours: The timing of an MI (including an evolving MI) should be from the time the symptoms began. This would be the onset of symptoms that prompted the patient to seek medical care. (page 23)

Cerebrovascular Disease: Please see page 24 for an additional clarification for this data element. *Please note that this clarification differs from that of the Percutaneous Coronary Interventions Reporting System.*

Shock: An additional clarification for this data element has been added: If the patient has an IABP – the non-augmented BP should be < 80 mmHg to code shock. (page 26)

CHF (Current and Past): There must be a clinical diagnosis of CHF in the medical record, in addition to symptoms and medications. (page 27)

Malignant Ventricular Arrhythmia: Please see page 28 for an additional clarification for this data element.

Extensive Aortic Atherosclerosis: Please see page 29 for additional clarifications for this data element.

Heart Transplant Candidate: This risk factor should only be coded when the patient is an approved heart transplant candidate BEFORE the start of the procedure.

Supporting documentation must be included in the patient's medical record showing that the patient was a transplant candidate PRIOR to the start of the procedure. Acceptable documentation includes: notes that a pre-transplant evaluation was performed, notes from the transplant coordinator that they have discussed this issue with the patient/family and they agree prior to surgery, or a note indicating the transplant patient's status based on UNOS urgency criteria. (page 31)

Cardiomegaly and Active Endocarditis: These risk factors should be coded for any patient that has either condition, regardless of the procedure being performed. (page 32)

Major Events Following Surgery

Renal Failure: The new definition is: "The need for temporary or permanent renal dialysis of any type." (page 35)

Respiratory Failure: If the patient is intubated for 72 or more hours post-op the event should be coded, regardless of whether the patient was intubated prior to the procedure. (page 35)

Unplanned Cardiac Reoperation or Interventional Procedure: This major event has been updated. Please see the definition and interpretation on page 36.

Revision Highlights and Coding Clarification (Cont.)

Medications on Discharge

- Plavix will now be referred to as Clopidogrel. (page 37)
- These variables only need to be reported for patients who had a CABG.
- If a patient was started on a medication in the hospital, in order to code it as a medication on discharge it must be indicated as a discharge medication.

Discharge Status

The policy of a Hospice discharge counting as an in-hospital mortality has been amended: *Beginning with patients discharged on or after January 1, 2003, any patient that is discharged from the hospital after cardiac surgery or PCI to hospice care (inpatient or home with hospice care) and is still alive 30 days after the discharge from the hospital will be analyzed as a live discharge.*

All patients discharged to a hospice or home with hospice care should continue to be reported with Discharge Status – 12: Hospice. If a patient is still alive 30 days after discharge, whether in hospice or not, appropriate supporting documentation should be sent to Cardiac Services Program. Examples of appropriate documentation include: a dated progress note from the hospice service, evidence of a follow-up doctors visit 30 days after discharge, evidence of subsequent hospital admission 30 days after initial discharge. It will be the responsibility of the hospital (physician) to send documentation to the Department of Health to support this change. Upon receipt, review, and verification of the documentation, Cardiac Services Program staff will change the discharge status from dead to alive for purposes of analysis. All documentation must be received before the final volume and mortality for a given year of data is confirmed by the hospital. (page 38)

When to Complete an Adult CSRS Form

Complete an Adult Cardiac Surgery Reporting System (CSRS) form for every patient age 18 or over on admission undergoing one or more operations on the heart or great vessels, with or without extracorporeal circulation.

If the patient went to the operating room more than once for cardiac surgery during a single hospital stay, **complete a separate form for each operating room visit.** (Example: if a patient's treatment involves 3 separate operating room visits for cardiac surgery, complete 3 CSRS forms).

Only operations on the heart or great vessels should be reported.

Analysis Categories

The Department of Health performs analysis on Adult CSRS cases using two categories: Isolated CABG and Valve cases. All other cardiac procedures are reported as “Other Cardiac Procedures”. See below for a description of each category.

Isolated CABG: This analysis includes any patient who has had one or more CABG procedures and no other cardiac procedure during the hospital admission, with the following exceptions as listed below. This analysis is performed on a one-year and three-year basis.

Valve Cases: This analysis category is a combination of eight separate groups (Aortic Valve Replacement (with or without CABG), Mitral Valve Repair (with or without CABG), Mitral Valve Replacement (with or without CABG), and Multiple Valve Repair or Replacement (with or without CABG)). To qualify for any single group the procedure(s) can be performed during any operating room visit during a single admission, with exceptions to the groups as noted below. This analysis is performed on a three-year basis.

Exceptions to the analysis categories:

Procedure Code 120: Atrial Septal Defect (ASD) Closure when coded with a CABG or a valve will be considered an isolated CABG and/or Valve case in any analyses performed by the Department of Health (DOH).

Procedure Code 123: Patent Foreman Ovale (PFO) Closure when coded with a CABG or a valve will be considered an isolated CABG and/or Valve case in any analyses performed by the DOH.

Procedure Code 710: Transmyocardial Revascularization combined with a CABG. This procedure will be counted as an isolated CABG case in any analyses performed by the DOH.

Procedure Code 715: Growth Factor Installation combined with a CABG. This procedure will be counted as an isolated CABG case in any analyses performed by the DOH.

Procedure Code 721: Resection or Plication of Left Ventricular (LV) Aneurysm combined with a CABG. This procedure will be counted as an isolated CABG case in any analyses performed by the DOH.

Procedure Code 722: Carotid Endarterectomy combined with a CABG. This procedure will be counted as an isolated CABG case in any analyses performed by the DOH.

Procedure Code 723: Implantation of AICD combined with a CABG. This procedure will be counted as an isolated CABG case in any analyses performed by the DOH.

Procedure Codes: 770-771: Radiofrequency or Operative Ablation combined with a CABG or valve will be counted as an isolated CABG and/or Valve case in any analyses performed by the DOH.

Procedure Codes: 830-834: Ventricular Assist Devices combined with a CABG or valve when pre-op risk factor Heart Transplant Candidate is NOT coded will be counted as an isolated CABG and/or Valve case in any analyses performed by the DOH.

NOTE: *In some instances when there is a combination of procedures performed and some procedures are deemed to be complications of the first procedure, the case may be included in analyses by the DOH. In addition, any of the above categories are subject to change as deemed necessary by the Cardiac Advisory Committee.*

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 Cardiac Surgery 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.

Date of Birth

Enter the patient's exact date of birth.

I. Patient Information (Cont.)

Sex

Check the appropriate box.

Ethnicity

Check the appropriate box.

Race

Check the appropriate box.

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."

For White Hispanics, check "White"; for Black Hispanics, check "Black".

Please note that race should be based on the patient's racial/ethnic origins, which is not necessarily the same as their country/place of origin. If the patient's race is unclear, please indicate "8 – Other". For example, Puerto Rican is not a race. However, if you are unsure of the patient's race you may code "8 – Other" and then specify "Puerto Rican".

The CSRS 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 <http://www.whitehouse.gov/omb/fedreg/1997standards.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 Appendix C.

Please note that starting in 2005, Worker's Compensation, Family Health Plus, and Other Federal Programs are reported as code "19-Other".

Medicaid

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

Interpretation: Primary Payer and Medicaid

For "Medicaid Pending" code Primary Payer as "11-Self-Pay" **and** check the box "Medicaid".

For patients in prison, code Primary Payer as "19-Other".

Please note the difference between "07-Other Private Insurance Company" and "19-Other". Code "07" refers to a Private Insurance Company (also referred to as "Commercial" insurance) that is not listed elsewhere. Code "19" is any other type of insurance that is not given a code of its own (e.g. Corrections).

If the patient has Blue Cross and Medicare, code Medicare if there is no indication of which is primary.

Report a PPO (Preferred Provider Organization) as "06 – HMO/Managed Care".

If you know a patient has Medicare or Medicaid, but do not know if it is Fee For Service or Managed Care, code Fee for Service.

I. Patient Information (Cont.)

PFI of Transferring Hospital

If the patient was transferred from another Acute Care Facility, enter the PFI of the transferring hospital.

This element only needs to be completed for Transfer patients.

A listing of PFIs for cardiac diagnostic centers in New York State (NYS) is provided in Attachment A. If transferred from a Veterans Administration hospital in NYS, enter "8888"; if transferred from outside NYS, enter "9999". For patients transferred from another hospital in NYS, please see <http://www.health.state.ny.us/nysdoh/hospital/main.htm> for a complete listing of NYS hospitals, including their PFI.

II. Procedural Information

REMINDER: *Fill out a separate CSRS form for each visit to the operating room for cardiac surgery involving the heart or great vessels during the hospital admission.*

Hospital that Performed Diagnostic Cath

If the cardiac surgery was preceded by a diagnostic catheterization, enter the name and PFI number of the hospital in the spaces 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 Operation

Enter the name and license number of the primary physician who performed the cardiac surgical procedure.

Interpretation:

The primary physician for each operating room visit should be the one who performed the majority of the cardiac operation in that operating room visit.

The following is one of many possible examples: A patient has both a radiofrequency ablation and a CABG in a single operating room visit. First a radiofrequency ablation is performed by one surgeon and then a CABG by a second surgeon. The primary physician should be the one who performed the CABG and NOT the one who performed the radiofrequency ablation, regardless of the fact that the ablation was performed before the CABG.

II. Procedural Information (Cont.)

Date of Surgery

Enter the date on which the cardiac surgical procedure was performed.

Remember to fill out a **separate adult cardiac surgery reporting system form** for *each* visit to the operating room that occurred during the admission.

Time at Start of Procedure

Enter the time of induction of anesthesia. This time should be reported using military time (i.e. 1:00 am is 01:00, and 1:00 pm is 13:00). This will be the time reported for any type of cardiac procedure.

Prior Surgery this Admission

Check the appropriate box to indicate whether the patient had any cardiac operations prior to the present operating room visit during the same hospital admission.

If "Yes" then the date of the previous cardiac operation **MUST** be entered. This is very important because this date aids in combining multiple procedures that occurred during the same admission in the proper order.

Cardiac Procedures This OR Visit

Enter the 3-digit State Cardiac Advisory Committee Code (SCAC) from the procedure code list in Attachment D – Congenital and Acquired Cardiac Procedure Codes.

List up to 4 cardiac procedures performed during this operating room visit.

If there are more than 4, list the 4 most significant.

If multiple procedures were performed during the same operation and there is a SCAC code for the combination of procedures, use the code for the combination rather than coding the procedures individually.

II. Procedural Information (Cont.)

CABG Information

If Procedure Codes 670, 720-724, or 740-747 are indicated, then the following information must be completed.

Total Conduits: List the total number of conduits or grafts performed up to 9. For more than 9, write 9.

Arterial Conduits: List the number of arterial conduits or grafts used up to 9. For more than 9, write 9. The number of arterial conduits **CANNOT** be larger than the total number of conduits.

Distal Anastomoses: List the total number of distal anastomoses up to 9. For more than 9, write 9. *A distal anastomosis is defined as a hole between a conduit or graft and a coronary touchdown site for the conduit or graft.* The number of distal anastomoses could be larger than the total number of conduits, especially in the case of sequential grafts.

Minimally Invasive

If the cardiac surgical procedure began through an incision other than a complete sternotomy or thoracotomy (*less than 12 centimeters in length*) check "Yes", regardless of whether the case converted to a standard incision or cardiopulmonary bypass was used. Otherwise check "No".

Converted to Standard Incision

Check this box to indicate that the minimally invasive procedure was modified to a standard incision.

NOTE: This box should never be checked unless Minimally Invasive is also checked.

Converted from Off Pump to On Pump

Check this box if the procedure began without the use of cardiopulmonary bypass, but prior to the completion of the procedure the patient was placed on pump. This should only be checked if the patient was placed on pump unexpectedly.

Entire Procedure Off Pump

Check this box if the cardiac procedure was performed entirely without the use of cardiopulmonary bypass.

II. Procedural Information (Cont.)

Internal Mammary Artery (IMA) Grafting

Check the appropriate box.

For any patient who has never had a left or right internal mammary artery (IMA) graft, code "0" (Never). If the patient is having an IMA graft during this operating room visit, code "1" (This OR Visit). If at anytime prior to this operating room visit (including this admission) the patient has had an IMA graft, code "2" (Prior to this OR Visit). If the patient has had an IMA graft anytime prior to this operating room visit and is having one during the operating room visit, code "1".

Within 24 hours Post-op

The following only need to be coded if the patient has a CABG during this admission.

Post-op is defined as starting when the patient leaves the actual procedure room where the cardiac operation occurred and does not include any recovery/holding areas within the operating room suite.

Extubation

Check this box for patients who were extubated at 24 hours post-op.

Extubation Contraindicated

Check this box for patients who were not extubated at 24 hours post-op because of one of the following: myocardial dysfunction; valvular heart disease; active systemic illness; respiratory disease; neuropsychiatric disease or problems with communication secondary to language. This would include stroke (new neurological deficit) and neuropsychiatric state (paranoia, confusion, dementia).

Beta Blocker Use

Check this box for all patients who received beta blockers within 24 hours post-op.

Beta Blockers Contraindicated

Check this box for any patient who did not receive beta blockers within 24 hours after surgery for any of the following reasons: allergy, bradycardia (heart rate less than 60 bpm) 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 and not on beta blockers, or other reasons documented by a physician, nurse practitioner, or physician's assistant in the medical chart.

III. Pre-Op Surgical Risk Factors

Surgical 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 an emergency as defined below.

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

Typical emergency patients include those in arrest with CPR administered immediately prior to the procedure, shock, ongoing ischemia including rest angina, acute evolving MI 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 ÷ 2.2

III. Pre-Op Surgical Risk Factors (Cont.)

Ejection Fraction and Measure

Record the ejection fraction taken closest to the cardiac procedure. If 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 then enter "9 – Unknown" for the 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.

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

Any cases with a missing or $\leq 10\%$ ejection fraction will be sent back during quarterly and annual data validation to verify accuracy of this data element.

III. Pre-Op Surgical Risk Factors (Cont.)

CCS Functional Class

Enter the number (1-4) corresponding to the patient's Canadian Cardiovascular Society (CCS) Functional Class or 8 for No Angina, as defined below.

Anginal equivalent symptoms (e.g. shortness of breath) can be used to determine the appropriate functional class.

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.
8. None Patient does not have Angina CCS Class I-IV as defined above and includes those who do not have angina but may present with chest pain associated with an MI.

Note: The determination of functional class should be based on the typical level of exertion required to produce angina.

Creatinine

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

Interpretation:

If no pre-operative creatinine values are available from the current hospital stay, it is acceptable to use values found during Pre-Admission Testing (up to 2 weeks prior to the intervention). If the patient is transferred, the creatinine can come from the transferring hospital.

III. Pre-Op Surgical Risk Factors (Cont.)

Vessels Diseased

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

Interpretation:

This section **MUST** be completed for **ALL** CABG cases. If this information is available for other procedures, please indicate the vessels diseased, otherwise leave blank.

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

MILD = < 50%
MODERATE = 50-69%
SEVERE = ≥ 70%

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 re-vascularized.

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 the range “40-50%” stenosis, then DO NOT CODE as diseased. If the medical record reports the range “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.

III. Pre-Op Surgical Risk Factors (Cont.)

Valve Disease - This Section is Required for Valve Patients

Enter an assessment of the degree of stenosis or incompetence (*acute or chronic*) for each valve (Aortic, Mitral, Tricuspid). Both lines should be completed for all valve patients.

Please enter the following values for each valve to indicate the degree of stenosis or incompetence:

- 0. None
- 1. Mild
- 2. Moderate
- 3. Severe

**Moderate or Severe Stenosis
Aortic, Mitral, or Tricuspid**

Should be demonstrated by appropriate imaging technique, echocardiography, or hemodynamic measurement during cardiac catheterization or operation.

**Moderate or Severe
Aortic Incompetence**

Should be demonstrated by aortography or by pre-op or intraoperative echocardiography.

**Moderate or Severe
Mitral Incompetence**

Should be demonstrated by left ventriculography or by pre-op or intraoperative echocardiography.

**Moderate or Severe
Tricuspid Incompetence**

Should be demonstrated by physical examination or by pre-op or intraoperative echocardiography.

Note: *If a patient is not having a valve procedure, but disease (stenosis or incompetence) is indicated, please code.*

III. Pre-Op Surgical Risk Factors (Cont.)

0. None

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

1-3. Previous Open Heart Operations

If the patient had open-heart surgery prior to the current operating room visit, check the appropriate box to indicate the number of such operations.

For the purposes of this reporting system, minimally invasive procedures are considered open-heart surgery.

Include any surgeries that occurred prior to this one including those earlier in the current admission.

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

4-7. Previous MI (most recent)

If the patient had one or more myocardial infarctions before surgery, report the length of time since the **most recent** MI. Timing should be from the onset of symptoms to the start of the surgery. If the exact time that the symptoms started is not available in the medical record, every effort should be made to create a close estimate based on available documentation.

If less than 6 hours, check box "4".

If 6-23 hours, check box "5".

If 24 hours or more, enter the number of days in the space provided next to "6".

If 21 days or more, enter "21".

Transmural MI: If the most recent MI was transmural (new Q waves), check box 7.

III. Pre-Op Surgical Risk Factors (Cont.)

9. Cerebrovascular Disease

Code if there is documentation of 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 \geq 50% stenosis		X
4. Internal or Common Carotid Artery has \geq 50% stenosis	X	
5. History of a non-embolic stroke	X	
6. Carotid endarterectomy is scheduled for after surgery, but there is no pre-operative documentation of the carotid stenosis.		X

NOTE: #6 is different from the what is acceptable documentation in the Percutaneous Coronary Interventions Reporting System.

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 Vascular 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 are 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	

III. Pre-Op Surgical Risk Factors (Cont.)

Hemodynamic Instability at Time of Procedure

Determined just prior to or at the induction of anesthesia. These patients have hypotension and low cardiac output. The administration of pharmacological or mechanical support **MUST** be contained in the patient's medical record. For purposes of reporting, the surgical procedure **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
5. Documented evidence of hypotension, with IABP for mechanical support	X	
6. Fluid replacement alone with no other pharmacologic or mechanical support		X

When coding "Unstable", be careful of timing. It needs to be just prior to, or, at the induction of anesthesia. Once the initial phases of anesthesia have been administered, any instability after that would not constitute the patient being coded "Unstable". Some hospitals are using the terminology "around the time of anesthesia". If you cannot be sure by the rest of the documentation that it was in fact before anesthesia then **DO NOT** code.

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

Unstable CANNOT be coded with SHOCK

Key elements for documentation of "Unstable" include: 1) evidence of hypotension or low cardiac output and 2) administration of mechanical or pharmacological support prior to the induction of anesthesia.

III. Pre-Op Surgical Risk Factors (Cont.)

Hemodynamic Instability at Time of Procedure (Continued)

13. Shock

Acute hypotension (*systolic blood pressure < 80 mmHg*) or low cardiac index (*< 2.0 liters/min/m²*), despite pharmacologic or mechanical support.

Interpretation:

If the patient has an IABP – the non-augmented BP should be < 80 mmHg to code ‘shock’.

If the patient is Ventricular Assist Device (VAD) dependent then code ‘shock’. The type of VAD (Right, Left, Bi) is not important.

When coding ‘shock’, be careful of timing. It needs to be just prior to or at the induction of anesthesia. Once the initial phases of anesthesia have been administered any factors that would constitute the patient being coded ‘shock’ would **NOT** matter. Some hospitals are using the terminology “around the time of anesthesia”. If you cannot be sure by the rest of the documentation that it was in fact before anesthesia, **DO NOT** code.

*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/m²), 2) mechanical or pharmacological support, and 3) persistent acute hypotension (systolic blood pressure < 80 mmHg) or low cardiac index (< 2.0 liters/min/m²) subsequent to mechanical or pharmacological support.

III. Pre-Op Surgical Risk Factors (Cont.)

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.

Clinical diagnosis of CHF must appear in the medical record. Symptoms and/or treatment alone are not sufficient reason to code.

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
4. Positive BNP-B Type Natriurectic Peptide test without any of the clinical indications listed above.		X

19. Congestive Heart Failure, Past

Between 2 weeks and 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.

Clinical diagnosis of CHF must appear in the medical record. Symptoms and/or treatment alone are not sufficient reason to code.

III. Pre-Op Surgical Risk Factors (Cont.)

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.

If a patient is experiencing V-Tach or V-Fib that otherwise meets the above criteria, but is within 6 hours of an MI, you may still code this risk factor, **IF** the arrhythmia is not responding well to treatment. That is, if it continues despite electrical defibrillation or conversion with intravenous anti-arrhythmic agents.

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 pO₂ <60 or a pCO₂ >50.

NOTE: COPD should not be checked unless the patient’s medical record contains documented evidence 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 surgery		X
3. Fibrotic lungs on chest X-ray		X
4. Hyperinflated lungs at operation		X
5. Chart states asthma without medications		X
6. Sleep Apnea without any of the above criteria		X

III. Pre-Op Surgical Risk Factors (Cont.)

23. Extensive Aortic Atherosclerosis

Ascending, transverse, and/or descending aortic atherosclerosis marked by either extensive calcification or luminal atheroma such that the intended surgical procedure is altered.

Interpretation:

Documentation of the advanced aortic pathology by either transesophageal echocardiography, epiaortic echocardiography, intravascular ultrasound, magnetic resonance angiography or other imaging modality performed in the perioperative period should be available either by official report or dictated in the operative notes.

An operative note that dictates a change in the intended surgical procedure (i.e. clamp moved, procedure performed off pump) is acceptable documentation. Changes to the intended surgical procedure may also include documentation that more extensive evaluation/exploration of the aorta, for example epiaortic scanning, was performed.

Code if there is documentation of more than the usual amount (for age) of calcification or plaque formation in the ascending aorta, or plaque, palpable at surgery, in the ascending aorta.

Calcium in aortic arch on chest x-ray is not enough to code this risk.

24. Diabetes Requiring Medication

The patient is receiving either oral hypoglycemics or insulin.

Interpretation:

The patient must be on oral hypoglycemics or insulin prior to hospital admission.

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.

25. Hepatic Failure

The patient has cirrhosis or other liver disease
and has a bilirubin > 2 mg/dl
and a serum albumin < 3.5 g/dl.

III. Pre-Op Surgical Risk Factors (Cont.)

27. Renal Failure, Dialysis

The patient is on chronic peritoneal or hemodialysis.

Interpretation:

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

28. 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.

30. Emergency Transfer to OR after DX Cath

The patient requires immediate surgery following a diagnostic catheterization.

31. Emergency Transfer to OR after PCI

The patient requires immediate surgery following a Percutaneous Coronary Intervention (PCI).

32. Previous PCI, this admission

The patient has had a PCI during this admission, prior to the current cardiac surgery.

33. PCI before this admission

The patient has had a PCI before this admission.

III. Pre-Op Surgical Risk Factors (Cont.)

38. 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.

39. Any Previous Organ Transplant

The patient has had any organ transplant **prior** to the current cardiac surgery. This includes, but is not limited to, heart, lung, kidney, and liver transplants. If a heart or lung transplant was performed during the operating room visit that generated this form, DO NOT code this Risk Factor.

Interpretation:

Also code for bone marrow transplant.

Do not code for skin transplant (grafting).

40. Heart Transplant Candidate

This risk factor should be coded when the patient is an approved heart transplant candidate **BEFORE** the start of the procedure.

Supporting documentation must be included in the patient's medical record showing that the patient was a transplant candidate **PRIOR** to the start of the procedure. Acceptable documentation includes: notes that a pre-transplant evaluation was performed, notes from the transplant coordinator that they have discussed this issue with the patient/family, or a note indicating the transplant patient's status based on UNOS urgency criteria.

During quarterly and annual data verification and validation efforts, we will be asking for supporting documentation for cases coded with this risk factor. Therefore, we highly recommend that at the time of coding you keep supporting documentation in a place for easy retrieval at a later date.

III. Pre-Op Surgical Risk Factors (Cont.)

61. Cardiomegaly

Any left atrial (LA), left ventricular (LV), or right ventricular (RV) enlargement as documented by Echocardiography, Magnetic Resonance Imaging (MRI), Chest X-ray (CXR), or Computed Tomography (CT) Scan.

62. Active Endocarditis

Two or more positive blood cultures without other obvious source with demonstrated valvular vegetations or acute valvular dysfunction caused by infection.

Includes patients who are on antibiotics at the time of surgery.

Excludes patients who have completed antibiotic therapy and have no evidence of residual infection.

IV. Major Events Following Operation

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

Please Note: A *documented* pre-operative condition that persists post-operatively with no increase in severity is NOT a major event. This is true even if the pre-operative condition is not part of this reporting system.

Unless otherwise specified, major events are ONLY reported if they occur post-operatively, but before hospital discharge.

0. None

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

IV. Major Events Following Operation (Cont.)

1. Stroke (New Neurological Deficit) Intra-Op to 24 hours

Permanent new focal neurological deficit occurring either intra-operatively or within 24 hrs post-op.

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-op event.

If the new deficit is still present at discharge, the event should be coded.

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

Permanent new focal neurological deficit occurring more than 24 hours post-op.

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-op event.

If the new deficit is still present at discharge, the event should be coded.

2. Transmural MI (New Q Waves)

New Q waves occurring within 48 hours after surgery.

IV. Major Events Following Operation (Cont.)

4. Deep Sternal Wound Infection (Bone-Related)

Drainage of purulent material from the sternotomy wound **and** instability of the sternum.

NOTE: A deep sternal wound infection should be reported as a major event following operation even if it does not become apparent until after the patient is discharged from the hospital. **It should be reported if diagnosed up to 6 months post-op.**

Interpretation:

If there is documentation of a deep sternal wound infection *ANYWHERE* in the patient's medical record, then it should be coded. This is true even if the information is in documentation from a subsequent admission.

DO NOT code based solely on the following:

- Debridement secondary to necrosis, with negative (-) infection
- Positive (+) drainage, negative (-) cellulitis, sternum is showing NO instability.

5. Bleeding Requiring Reoperation

Unplanned reoperation within 36 hours post-op to control bleeding or evacuate large hematomas in the thorax or pericardium.

Interpretation:

No matter where the bleeding was controlled (e.g. ICU, OR, bedside), if it occurred within 36 hours of the procedure, **CODE IT.**

The following scenario **WOULD NOT** be coded because the chest was left open intentionally and therefore does not qualify as a major event:

CABG surgery on 11/7 – chest left open
Evacuate clots on 11/8
Operating Room to close chest on 11/9

IV. Major Events Following Operation (Cont.)

8. Sepsis or Endocarditis

Sepsis: Fever and positive blood cultures related to the procedure.

Endocarditis: Two or more positive blood cultures without other obvious source, demonstrated valvular vegetation, or acute valvular dysfunction caused by infection.

9. G-I Bleeding, Perforation, or Infarction

Any post-operative episode of vomiting blood, gross blood in the stool, perforation or necrosis of the stomach or intestine.

The episode **MUST** occur post-surgery, but before hospital discharge.

10. Renal Failure

The need for temporary or permanent renal dialysis of any type.

Do not code this item if Risk Factor 27 (Renal Failure, Dialysis) is coded.

13. Respiratory Failure

Pulmonary insufficiency requiring intubation and ventilation for a period of 72 hours or more, at any time during the post-operative stay. For patients who are placed on and taken off ventilation several times, the total of these episodes should be 72 hours or more.

Interpretation:

If the patient is intubated for 72 or more hours after surgery this major event should be coded, even if the patient was intubated prior to the procedure.

The following scenario **WOULD** be coded:

Patient was extubated 48 hours post-op,
Patient was re-intubated sometime the next day,
Patient was extubated 32 hours later.

IV. Major Events Following Operation (Cont.)

14. Unplanned Cardiac Reoperation or Interventional Procedure

Any unplanned cardiac reoperation or percutaneous coronary intervention that is required as a result of the current cardiac surgery. This would **exclude** a reoperation to control bleeding that occurs within 36 hours of the surgery.

Interpretation:

This major event should be reported for any cardiac surgery, not just those reportable in the NYS Cardiac Surgery Reporting System (CSRS). Procedures should be directly related to the heart. Examples of reportable surgeries include but are not limited to: CABG, cardiac massage, or cardiac explorations. Some examples of the procedures not reportable are: pacemaker insertion, pericardiocentesis, and pleurocentesis.

If the chest is left open after surgery with a return to the operating room to close, this would not be considered an unplanned cardiac reoperation. Also, if clots need to be removed from an open chest this would *not* be considered an unplanned cardiac reoperation.

The procedure does not have to be performed in the operating room or cath lab.

This event would not be coded under the following situation: the patient has a reoperation to control bleeding less than 36 hours after surgery and then goes back greater than 36 hours to once again control bleeding. In this instance coding the major event "5 - Bleeding Requiring Reoperation" is sufficient.

V. Discharge Information

Medications on Discharge

The following only need to be coded if the patient has received a CABG during this admission.

Aspirin

Check this box for all patients who received aspirin or dipyridamole on discharge. If the patient is allergic to aspirin check for all patients discharged on clopidogrel or ticlopidine.

V. Discharge Information (Cont.)

Medications on Discharge (Cont.)

Aspirin Contraindicated

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 the hospital stay, Warfarin/Coumadin prescribed at discharge, or other reasons documented by a physician, nurse practitioner, or physician's assistant in the medical chart.

Clopidogrel

Enter the appropriate number in the box:

- 0 Not Discharged on clopidogrel
- 1 Discharged on clopidogrel and Aspirin
- 2 Discharged on clopidogrel but not on Aspirin

Beta Blocker Use

Check this box for all patients who were discharged on beta blockers.

Beta Blockers Contraindicated

Check this box for any patient who was not discharged on beta blockers for any of the following conditions: allergy, bradycardia (heart rate less than 60 bpm) 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 and not on beta blockers, or other reasons documented by a physician, nurse practitioner, or physician's assistant in the medical chart.

Lipid Lowering Medications

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

Lipid Lowering Medications Contraindicated

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

V. Discharge Information (Cont.)

Discharged Alive To

Check the appropriate box.

If a patient is discharged to Hospice (including Home with Hospice), code the status a “12”. NOTE that for purposes of analysis a hospice discharge (“12”) is considered an in-hospital mortality, unless the hospital can provide documentation that 30 days after discharge the patient was still alive (even if still in Hospice). (Please see the full Hospice policy and reporting requirements on page 9 of the “Revision Highlights and Coding Clarifications”)

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 status “19” that is reported without an indication of where the patient was discharged to will be sent back during data verification and validation efforts.

Died in

Check the appropriate box.

If “8 – Elsewhere in Hospital (specify)” is checked, specify where the patient died.

Any status “8” that is reported without an indication of where the patient died will be sent back during data verification and validation efforts.

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.

V. Discharge Information (Cont.)

30 Day Status

Report the patient's status at 30 days post-procedure using the appropriate code.

VI. Person Completing Report

Name

Enter the name and telephone number of the person completing the report, and the date the report was completed.

Referring Physician

This space is provided as an aid to the hospital. It was intended to allow the name of the referring cardiologist or primary care physician to be entered. For many hospitals this is useful for tracking 30-day status. By entering the name of the referring physician case lists can be generated and sent to the referring physician for follow-up. This field is NOT required and is not used by the Department of Health. It is provided solely for the use of the individual hospitals.

ATTACHMENT A

A complete listing of NYS hospitals, including their PFI can be found by county at: <http://www.health.state.ny.us/nysdoh/hospital/main.htm>

PFI NUMBERS FOR CARDIAC DIAGNOSTIC AND SURGICAL CENTERS
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PFI #	HOSPITAL
0001	Albany Medical Center Hospital
0116	Arnot Ogden Medical Center
1438	Bellevue Hospital Center
0989	Benedictine Hospital
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
1301	Kings County Medical Center
0990	Kingston Hospital
1450	Lenox Hill Hospital
1302	Long Island College Hospital
1630	Long Island Jewish Medical Center
1304	Lutheran Medical Center
1305	Maimonides Medical Center

ATTACHMENT A

PFI NUMBERS FOR CARDIAC DIAGNOSTIC AND SURGICAL CENTERS
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PFI #	HOSPITAL
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
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
1463	NYU Hospitals Center
0686	Orange Regional Medical Center
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

ATTACHMENT A

PFI NUMBERS FOR CARDIAC DIAGNOSTIC AND SURGICAL CENTERS

PFI #	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
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	35 Oswego
02 Allegany	36 Otsego
03 Broome	37 Putnum
04 Cattaraugus	38 Rensselaer
05 Cayuga	39 Rockland
06 Chautauqua	40 St. Lawrence
07 Chemung	41 Saratoga
08 Chenango	42 Schenectady
09 Clinton	43 Schoharie
10 Columbia	44 Schuyler
11 Cortland	45 Seneca
12 Delaware	46 Steuben
13 Dutchess	47 Suffolk
14 Erie	48 Sullivan
15 Essex	49 Tioga
16 Franklin	50 Tompkins
17 Fulton	51 Ulster
18 Genesee	52 Warren
19 Greene	53 Washington
20 Hamilton	54 Wayne
21 Herkimer	55 Westchester
22 Jefferson	56 Wyoming
23 Lewis	57 Yates
24 Livingston	58 Bronx
25 Madison	59 Kings
26 Monroe	60 Manhattan
27 Montgomery	61 Queens
28 Nassau	62 Richmond
29 Niagara	
30 Oneida	
31 Onondaga	88 Unknown
32 Ontario	
33 Orange	99 Outside NYS
34 Orleans	

ATTACHMENT C

Payer Codes

- 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
- 11 Self Pay
- 19 Other

ATTACHMENT D

NEW YORK STATE DEPARTMENT OF HEALTH STATE CARDIAC ADVISORY COMMITTEE

CONGENITAL AND ACQUIRED CARDIAC PROCEDURE CODES

100-398 Congenital Heart Disease - Operations Performed *With or Without Extracorporeal Circulation*

Note: Extracorporeal circulation will be determined from the data element Entire Procedure Off Pump reported under Section II. Procedural Information on the front of the form. Please accurately complete this item for all appropriate cases.

Anomalies of Pulmonary Veins

- 100 Repair of Anomalous Pulmonary Venous Return
- 101 Repair of Pulmonary Vein Stenosis
- 103 Repair of Partial Anomalous Pulmonary Venous Return

Anomalies of Atrial Septum

- 120 ASD Closure
- 121 Creation of ASD
- 122 Repair of Cor Triatriatum
- 123 PFO Closure

Atrioventricular Septal Defect (AVSD)

- 130 Repair of Complete AV Canal
- 131 Repair of Partial AV Canal

Anomalies of Ventricular Septum

- 140 Repair of VSD
- 141 Creation/Enlargement of VSD
- 142 Fenestration of VSD Patch

ATTACHMENT D – Congenital and Acquired Cardiac Procedure Codes (Cont.)

Anomalies of Atrioventricular Valves

	Tricuspid Valve
150	Repair (<i>Non-Ebstein's Valve</i>)
	Replacement
151	Homograft
152	Prosthetic
153	Tricuspid Valve Closure
154	Repair Ebstein's Anomaly
	Mitral Valve
160	Resect supramitral ring
161	Repair (including annuloplasty)
	Replacement
162	Homograft
163	Prosthetic
170	Common AV Valve Repair

Anomalies of Ventricular Outflow Tract(s)

	Pulmonary Ventricular Outflow Tract
180	Pulmonary Valvotomy/Valvectomy
181	Resection of subvalvular PS
182	Repair of supra-valvular PS
	Pulmonary Valve Replacement
190	Homograft
191	Prosthetic
	Pulmonary Outflow Conduit
	Valved
200	Homograft
201	Prosthetic
202	Non-Valved
	Transannular Patch
210	With Monocusp Valve
211	Without Monocusp Valve
212	Repair Branch PS
	Aortic Ventricular Outflow Tract
220	Aortic Valvuloplasty
221	Aortic Valvotomy
230	Repair Supra-valvular AS
231	Resection of Discrete Subvalvular AS
235	Aortoventriculoplasty (<i>Konno Procedure</i>)
	Aortic Valve Replacement
240	Autograft
241	Homograft
242	Prosthetic
243	Heterograft

ATTACHMENT D – Congenital and Acquired Cardiac Procedure Codes (Cont.)

Anomalies of Ventricular Outflow Tract(s) (Cont.)

	Aortic Root Replacement
250	Autograft
251	Homograft
252	Prosthetic
255	LV Apex to Aorta Conduit

Tetralogy of Fallot

260	Repair with Pulmonary Valvotomy
261	Repair with Transannular Patch
262	Repair with Non-valved Conduit
	Repair with Valved Conduit
263	Homograft
264	Prosthetic
265	Repair with reduction/plasty of PAs
	Repair with pulmonary valve replacement
266	Homograft
267	Prosthetic

Truncus Arteriosus

262	Repair with Non-Valved Conduit
	Repair with Valved Conduit
263	Homograft
264	Prosthetic

Univentricular Heart (Single Ventricle)

	Fontan Operations
270	Direct RV-PA Connection
	Total Cavopulmonary Connection
271	Lateral tunnel – nonfenestrated
272	Lateral tunnel – fenestrated
273	Extracardiac – nonfenestrated
274	Extracardiac – fenestrated
275	Septation of Single Ventricle
	Hypoplastic Right Ventricle
	Valved
200	Homograft
201	Prosthetic
202	Non-Valved

ATTACHMENT D – Congenital and Acquired Cardiac Procedure Codes (Cont.)

Univentricular Heart (Single Ventricle) (Cont.)

- Transannular Patch
- 210 With Monocusp Valve
- 211 Without Monocusp Valve
- Hypoplastic Left Ventricle
- 280 Norwood

- 290 Damus Kaye Stansel (*DSK*)

Transposition of Great Arteries or Double Outlet RV

- 310 Arterial Switch
- 311 Senning Procedure
- 312 Mustard Procedure
- 313 Intraventricular Repair of DORV
- Rastelli Procedure
- RV-PA Conduit
- Valved
- 320 Homograft
- 321 Prosthetic
- 322 Non-Valved
- 325 REV operation (*Modified Rastelli*)
- LV-PA Conduit
- Valved
- 326 Homograft
- 327 Prosthetic
- 328 Non-Valved

Great Vessel Anomalies

- 330 PDA Ligation
- 331 Repair Aortopulmonary Window
- 332 Reimplantation of left or right pulmonary artery
- 333 Repair Sinus of Valsalva Aneurysm
- Aortic Repair (*Coarctation or Interruption*)
- 340 End to end anastomosis
- 341 Subclavian flap angioplasty
- 342 Onlay Patch
- 343 Interposition graft
- 344 Vascular Ring Division
- 345 Repair of PA Sling
- 346 Reimplantation of Innominate Artery
- 347 Aortoplexy

ATTACHMENT D – Congenital and Acquired Cardiac Procedure Codes (Cont.)

Coronary Artery Anomalies

- Translocation of LCA to Aorta
- 350 Direct
- 351 Transpulmonary Tunnel (*Takeuchi*)
- 352 Coronary Artery Ligation
- 353 Coronary Fistula Ligation

Cardiomyopathies

- 360 Left Ventricular Reconstruction (*Batiste Procedure, Surgical Ventricular Restoration*)
- 361 Radical Myomectomy

Interval Procedures

- 370 Pulmonary Artery Band
- 375 Unifocalization of Pulmonary Vessels
Shunts
- 381 Central Aortopulmonary Shunt
Blalock Taussig Shunts
- 382 Classical
- 383 Modified
Glenn Shunts
- 384 Unidirectional (*Classical*)
- 385 Bidirectional
- 386 Bilateral Bidirectional

- 390 Cardiac Arrhythmia Surgery

- 398 Other Operations for Congenital Heart Disease**

400-998 Acquired Heart Disease - Operations Performed *With or Without Extracorporeal Circulation*

- 401 Mitral Valvotomy
- 402 Pericardiectomy
- 403 Stab Wound of Heart or Great Vessel Repair (*without extracorporeal circulation*)
- 404 Saccular Aortic Aneurysm

Repair Of Aortic Deceleration Injury

- 420 With Shunt
- 421 Without Shunt
- 498 Other Operation for Acquired Heart Disease,
Performed without Extracorporeal Circulation**

ATTACHMENT D – Congenital and Acquired Cardiac Procedure Codes (Cont.)

Valvuloplasty - Single Valve

500 Aortic
501 Mitral
502 Tricuspid

Replacement - Single Valve

510-518* Ross Procedure
520-528* Aortic Mechanical
530-538* Aortic Heterograft
540-548* Aortic Homograft
550-558* Mitral Mechanical
560-568* Mitral Heterograft
570-578* Tricuspid Mechanical
580-588* Tricuspid Heterograft
590-598* Pulmonary
600-608* Mitral Valve Homograft

Multiple Valve Surgery - Valvuloplasty Or Replacement

610-618* Double, Including Tricuspid
620-628* Double, Not Including Tricuspid
630-638* Triple

*REOPERATIONS: For Single Valve Replacement or Multiple Valve Surgery (510-638), use third digit to indicate reason for reoperation, as follows:

0 Not a Reoperation	4 Failed Valvuloplasty
1 Periprosthetic Leak	5 Disease of Another Valve
2 Prosthetic Endocarditis	8 Other Reason
3 Prosthetic Malfunction	

*Examples: Aortic Heterograft, not a reoperation: 530
Valvuloplasty or Replacement, Triple, due to Prosthetic Endocarditis: 632*

Valve Conduits

Aortic Valve and Ascending Aorta Replacement: Record Under Aneurysms

660 Apical Aortic Conduit

ATTACHMENT D – Congenital and Acquired Cardiac Procedure Codes (Cont.)

Coronary Artery Bypass Grafts

670 Coronary Artery Bypass Graft

Please Note: If you code a 670 then you must complete the CABG Information under the Procedural Information Section of the Form.

Other Revascularization

710 Transmyocardial Revascularization

715 Growth Factor Installation

Combined CABG With Other

720 Acquired Ventricular Septal Defect

721 Resection or Plication of LV Aneurysm

722 Carotid Endarterectomy

723 Implantation of AICD

724 Ventricular Reconstruction (*Batiste Procedure, Surgical Ventricular Restoration*)

Please Note: If you code a 720-724 then you must complete the CABG Information under the Procedural Information Section of the Form.

Valve Surgery And CABG

740 Mitral Valve Replacement Plus Single or Multiple CABG

741 Mitral Valvuloplasty Plus Single or Multiple CABG

742 Aortic Valvuloplasty or Replacement Plus Single or Multiple CABG

744 Double Valvuloplasty or Replacement, including Tricuspid, Plus Single or Multiple CABG

745 Double Valvuloplasty or Replacement, not including Tricuspid, plus Single or Multiple CABG

746 Other Single Valve Surgery Plus Single or Multiple CABG

747 Other Multiple Valve Surgery Plus Single or Multiple CABG

Please Note: If you code a 740-747 then you must complete the CABG Information under the Procedural Information Section of the Form.

Surgery For Complication Of CAD Without CABG

760 Acquired Ventricular Septal Defect

761 Resection or Plication of LV Aneurysm

762 Ventricular Reconstruction (*Batiste Procedure, Surgical Ventricular Restoration*)

ATTACHMENT D – Congenital and Acquired Cardiac Procedure Codes (Cont.)

Radiofrequency or Operative Ablation

- 770 Atrial
- 771 Ventricular
- 772 Maze Procedure

Aortic Aneurysm Repair/Aortic Root Replacement

- 780 Ascending Aorta, With Graft, With Coronary Reimplantation
- 781 Ascending Aorta, Replacement or Repair, Without Coronary Reimplantation
- 782 Transverse Aorta
- 783 Descending Thoracic Aorta (*Excluding Acute Deceleration Injury*)
- 784 Thoracoabdominal
- 785 Aortic Root Replacement or Repair, With Graft, With Coronary Reimplantation

Dissecting Aneurysm Surgery

- 800 Intraluminal Graft
- 801 Intraluminal Graft with Aortic Valve Suspension
- 802 Tube Graft with Aortic Valve Suspension
- 803 Tube Graft with Aortic Valve Replacement
- 818 Other Dissecting Aneurysm Surgery

Transplant Procedures

- 820 Heart Transplant
- 821 Heart and Lung Transplant
- 822 Lung Transplant
- 830 Left Ventricular Assist Device (*LVAD*) – Extracorporeal
- 831 Left Ventricular Assist Device (*LVAD*) – Implantable
- 832 Right Ventricular Assist Device (*RVAD*)
- 833 Bi-Ventricular Assist Device (*BIVAD*)
- 834 Extracorporeal Membrane Oxygenation (*ECMO*)
- 840 Ventricular Assist Device as a Destination Therapy (*must also code either 830 or 831*)
- 901 Artificial Heart

ATTACHMENT D – Congenital and Acquired Cardiac Procedure Codes (Cont.)

Other

- 902 Pulmonary Embolectomy
- 903 Stab Wound of Heart or Great Vessel Repair (*with extracorporeal circulation*)
- 904 Removal of Intracardiac Tumor
- 905 Removal of Intracardiac Catheter
- 906 Repair of Aortic Deceleration Injury (*With Aortofemoral Bypass*)
- 907 Repair of a Cardiac Laceration due to Trauma
- 915 Septal Myomectomy
- 916 Ventricular Myomectomy
- 920 Ventricular Free Wall Rupture

- 998 Other Operation for Acquired Heart Disease,
Performed with Extracorporeal Circulation**