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

Instructions and Data Element Definitions
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Table of Contents

Topic	Page

Topic	Page

Revision Highlights and Coding Clarification

Procedure Codes

402 – Pericardiectomy

Any time the procedure consists of more than a pericardial window (i.e. stripping or partial pericardiectomy) it should be coded as a 402.

825 – Ventricular Assist Device Placed as a Bridge to Transplant

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 as 825. Therefore, we highly recommend that at the time of coding you keep supporting documentation in a place for easy retrieval at a later date.

For patients who do not meet the above criteria, the procedure should be coded as an 823 – Ventricular Assist Device. Cases coded with an 823 AND a coronary artery bypass graft (CABG) code (671-706, 721,722, or 723) will be considered as an isolated CABG procedure in ALL analyses conducted by the Department of Health.

CABG CODES:

Please note that the definition of CABG Procedures has been updated to more accurately represent the information in this section. Codes 681-686 and 691-696 now have the additional statement of "with or without Saphenous Vein Grafts" added to their definition.

Examples for coding using the new definitions:
- A double, internal mammary artery graft with two saphenous vein grafts would be coded as 694.

- A single, radial artery graft with a saphenous vein graft would be coded as 682.

- A single, internal mammary, a double, radial artery, and 3 saphenous vein grafts would be coded as 706.

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 aorta, valves, or pulmonary artery

CODE THE FOLLOWING ONLY WHEN PERFORMED IN THE SAME OPERATING ROOM VISIT AS A CABG: Carotid Endarterectomies (722)
Implantation of an AICD   (723)

CSRS FORM REQUIRED:

When removal of a thymoma, cyst, adhesion, etc. is the ONLY cardiac procedure performed in a hospital admission, code it as a 904 "Removal of Intracardiac Tumor", otherwise the procedure is NOT CODED.

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

> Intra-operative removal of a stent
> Right atrium repair
> Septal myomectomy
> Ventricular free wall rupture
> Aortic endarterectomy

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

Intra-Operative PCI:

Code as a CABG. To code this, count this procedure as a distal anastomosis of the saphenous vein. Therefore, this procedure done in isolation should be coded a 671 and when performed with a single arterial graft should be a 682.

Procedural Information

Heparin:

Should ONLY be reported if it was administered through an IV. DO NOT report low molecular weight heparin or heparin administered subcutaneously.

Major Events Following Surgery

Stroke:

Transient neurological deficits (i.e. TIA) are NO longer reported as a post-procedural event.

Pre-Operative Risk Factors

Previous MI < 24 hours:

Documentation MUST be present in the medical record that reports the date and time the patient was ruled in with an MI, along with the date and time of the surgery.

Congestive Heart Failure, Current and Past:

These have new definitions as of 2001. It is important to recognize the fact that it is now possible to code BOTH risk factors. This is due to the fact that the definitions are now within "2 weeks" and "2 weeks and 6 months", respectively. It is also important to note that the definitions are no longer subjective NYHA classifications rather they have specific requirements that need to be met for coding.

When to Complete an Adult CSRS Form

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

If there was more than one cardiac or great vessel operation during the stay, complete only one form.

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

A surgical procedure begins at the time of the FIRST skin incision, unless otherwise stated.

Procedure Code 721: Resection or Plication of LV Aneurysm combined with a CABG. This procedure will be counted as an isolated bypass case in any analyses performed by the Department of Health.

Do not code aortic root enlargements when performed with aortic valve replacements. When done with a root replacement, code the entire procedure as 781 or 785.

Multiple Procedures in the Same Hospital Admission:

The first OR visit in which an operation to the heart or great vessels occurred should be the procedure that is used to complete the majority of the form. Fields that should be included are: Primary Physician Performing Operation, Surgery Date, Ejection Fraction, Vessels Diseased, and any Pre-operative Risk Factors.

It is important to recognize that some data elements can be both a pre-operative risk factor and a major event following the procedure. If the event in question happens prior to the first procedure, then CODE the pre-operative risk factor and DO NOT CODE the major event. If the event occurs after the first procedure, but prior to the next procedure, CODE the major event and DO NOT CODE the pre-operative risk factor.

For example: if a patient develops a stroke after the first OR visit and then goes back to the OR for another surgery, DO NOT CODE a Stroke as a pre-operative risk factor. Instead CODE the stroke as a major event.

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 the first name and middle initial. Please note that this field is only for your individual use. The patient's name will NOT be transmitted to the Department of Health and will NOT appear on any reports generated by the software.

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, if known; otherwise, leave this item blank.

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"; "Other" refers to races other than White or Black, such as Asian, American Indian, or Middle Eastern.

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 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.

II. Procedural Information

Hospital Performing 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 primary cardiac surgical procedure.

The *primary cardiac surgical procedure* is determined by the first operating room visit that has an operation to the heart or great vessels in any single hospital admission.

Date of Primary Surgery

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

The *primary cardiac surgical procedure* is determined by the first operating room visit that has an operation to the heart or great vessels in any single hospital admission.

Primary Cardiac Procedure

Enter the three-digit State Cardiac Advisory Committee (SCAC) code from the procedure code list in Attachment C. If multiple procedures were performed during the same operation and there is an SCAC code for the combination of procedures, use the code for the combination rather than coding the procedures individually.

Other Cardiac Procedure

If multiple procedures were performed during the same operation and there is no SCAC code for the combination, enter the three-digit SCAC code for the other (*non-primary*) procedure. If there were two separate operations on the heart or great vessels during the same hospital stay, enter the three-digit SCAC code for the other (*non-primary*) operation.

II. Procedural Information (Cont.)

LIMA to LAD

For CABG procedures only. Check the appropriate box to indicate the use of the left internal mammary artery (LIMA) to the LAD.

NOTE: This field should ONLY be checked if the procedure was done using the LEFT. A CABG using the right internal mammary artery (RIMA) does NOT constitute coding this item.

Minimally Invasive

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

Converted to Standard Incision

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

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

Video Assisted Thoracic Surgery (VATS)

If a video assisted thoracoscope was used to perform all or part of the procedure, check "Yes", otherwise check "No".

Cardioplegia

If cardioplegia was **NOT** used, check "None".

If cardioplegia was used, check one box in each of the other four sections:

- Cold, Warm, or Both
- Intermittent or Continuous
- Antegrade, Retrograde, or Both
- Crystalloid, Blood, or Both

II. Procedural Information (Cont.)

IV Heparin within 48 hours Pre-op

Check the appropriate box.

ONLY code when un-fractionated IV Heparin is administered.
Subcutaneous or fractionated heparin, are NOT included in this category.

Global Myocardial Ischemic Time

Enter the global myocardial ischemic time in minutes.

Cardiopulmonary Bypass Time

Enter the cardiopulmonary bypass time in minutes.

Since this is the field that determines the use of extracorporeal circulation, it is vital that this field be complete and accurate.

This field SHOULD include any time that the patient experiences Circulatory Arrest.

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

Converted from Off Pump to On Pump

Check the box if the procedure began without the use of CP Bypass, but prior to the completion of the procedure the patient was placed on pump.

CP Bypass Time must also be completed for procedures that have this field checked.

III. Major Events Following Operation

Check to be sure that all of the listed major events occurred during or after the primary 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.

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.

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 NO longer reported as a post-op event.

If the 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 NO longer reported as a post-op event.

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

III. Major Events Following Operation (Cont.)

2. Transmural MI (New Q Waves)

New Q waves and a rise in CK-MB iso-enzyme to a level indicating myocardial infarction, occurring within 48 hours after surgery.

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 apparent 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 (-) cellulites, sternum is showing NO instability.

5. Bleeding Requiring Reoperation

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

Interpretation:

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
OR to close chest on 11/9

III. 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

Creatinine greater than 2.5 mg/dl for more than 7 post-operative days **or** there is 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:

The following scenario *WOULD* be coded:

> Patient was intubated,
> Patient was extubated 48 hours later,
> Patient was re-intubated within 24 hours,
> Patient was extubated 32 hours later.

IV. Discharge Information

Discharged Alive To

Check the appropriate box.

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

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

"19 – Other (specify)" should NEVER be checked if it is specified as "4 – Died CCU" or "Died", these cases should be coded in the next section.

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 acute rehab setting or to another acute care setting the discharge status should be "13".

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.

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.

30 Day Status

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

V. Pre-Operative 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 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 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

V. Pre-Operative Risk Factors (Cont.)

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, check "Unknown".

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

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 is acceptable and should be reported if it is measured or estimated by the following:

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

If the measure is unknown code it as a "9. Unknown".

An Ejection Fraction that is described 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 annual data validation to verify accuracy of this data element.

Stress Test Results

1. Positive ECG, radionuclide, or echo stress test was positive by standard criteria.

2. Negative ECG, radionuclide, or echo stress test was negative by standard criteria.

3. Not Done Stress test was not performed.

9. Unknown Stress test was performed, but results are unknown.

V. Pre-Operative Risk Factors (Cont.)

Angina: CCS Functional Class

Check the box corresponding to the patient's Canadian Cardiovascular Society Functional Class, as defined in Attachment D.

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.

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

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

A stenosed graft is coded as the native vessel.

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 Ramus Intermediate with a 70% lesion and the Distal Circumflex Trunk with a 50% you should code the LCX as 70-100%, since the Ramus Intermediate 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.

V. Pre-Operative Risk Factors (Cont.)

Valvular Stenosis and Incompetence

On each line, enter an assessment of the degree of stenosis or incompetence (*acute or chronic*). All six lines should be completed for all valve patients.

If this information is available for other patients please indicate it, but if it is unknown these items may be left blank.

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.

Pulmonary Artery Pressures

The systolic pulmonary artery pressure and the mean wedge should be reported for patients who have valvular heart disease.

If this information is available for other patients please indicate it, but if it is unknown these items may be left blank.

Cardiac Index

For valve patients, enter the cardiac index to the nearest tenth.

If this information is available for other patients please indicate it, but if it is unknown these items may be left blank.

V. Pre-Operative 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 hospitalization, check the appropriate box to indicate the number of such operations.

Do not count any operations during the current stay.

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

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.

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.

V. Pre-Operative Risk Factors (Cont.)

Peripheral Vascular Disease

8. Stroke

A history of stroke, with or without residual deficit.

9. Carotid/ Cerebrovascular

Angiographic or ultrasound demonstration of at least 50% narrowing in a major cerebral or carotid artery (common or internal), history of a non-embolic stroke, or previous surgery for such disease. A history of bruits or transient ischemic attacks (TIA) is not sufficient evidence of carotid/cerebrovascular disease.

10. Aortoiliac

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

11. Femoral/Popliteal

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

V. Pre-Operative Risk Factors (Cont.)

Peripheral Vascular Disease (Continued)

Interpretation:

Peripheral Vascular Disease	CODE	DO NOT CODE
Stroke		
1. Patient with TIA, vertigo per history & physical		X
2. Cerebral aneurysm and clipping residual deficit	X	
Carotid/Cerebrovascular		
1. External Carotid Artery has > 50% stenosis		X
2. Internal or Common Carotid Artery has > 50% stenosis	X	
Aortoiliac		
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
Femoral/Popliteal		
1. Leg ulceration and diminished leg pulses		X
2. Conflicting doctor note and H&P Cannot feel dorsalis pedis or posterior tibial pulses Consult note: 1+ peripheral pulses	X	
3. Angio report -> because of tortuosity of the vessel, even a sheath could not be passed up the wire.	X	
4. A negative popliteal pulse alone (1+1- or 1-1+)		X
5. A patient with a palpable Dorsalis Pedis and Posterior Tibial pulses and treated with Trental		X
6. If pulses are non-palpable, but is Dopplerable	X	
7. If Dorsalis Pedis and Posterior Tibial pulses are absent in the right or the left or both	X	
8. Below the knee amputation of one or both legs	X	
9. Inability to insert a catheter or IABP in femoral arteries	X	
10. At least 50% narrowing in a major femoral artery	X	

Hemodynamic Instability at Time of Procedure

Determined just prior to or at the induction of anesthesia. These patients usually have hypotension and low cardiac output **AND** 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. Documents 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 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.

There **MUST** be actual documentation of blood pressure and/or cardiac output, simply stating that the patient was hypotensive is **NOT** sufficient.

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

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

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

Hemodynamic Instability at Time of Procedure (Continued)

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:

To code a patient with "Shock" there must be evidence that all the criteria for "Unstable" have been met and that *DESPITE* the support the patient's hemodynamic status fails to improve or stabilize.

When coding "Shock", be careful of timing. It needs to be 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.

References in the medical record of "hemodynamics not improved", "continuing instability", etc are acceptable documentation.

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

37. CPR

The patient requires cardiopulmonary resuscitation within one hour prior to the procedure.

Interpretation:

To code "CPR", it **MUST** occur within ONE hour prior to surgery.

A single defibrillation, even if accompanied by *initial* compressions, **DOES NOT** constitute coding "CPR".

*CPR **CAN** be coded with either Unstable or Shock.*

V. Pre-Operative Risk Factors (Cont.)

14. More Than One Previous MI

Clinical or ECG evidence of more than one previous myocardial infarction (MI).

Interpretation:

The MI must be documented to have occurred **PRIOR** to the surgery.

If documentation (e.g. op note) indicates an "old scar", interpret this as an additional MI.

15. Hypertension History

Code if any of the following are present:

- Blood pressure greater than 140/90
- History of hypertension
- Current treatment for hypertension.

16. IV NTG within 24 hours before operation

IV nitroglycerin (NTG) given within 24 hours before surgery for ongoing myocardial ischemia or left ventricular (LV) failure.

Clinical evidence of the ischemia or LV failure should be part of the patient's medical record.

17. ECG Evidence of Left Ventricular Hypertrophy

Pre-op electrocardiogram shows evidence of LV hypertrophy.

NOTE: The ECG should have clear documentation of the patient's medical record number, the date the ECG was performed, the time the ECG was performed, and all interpretation printed on the ECG. If the interpretation for the ECG is not printed on it, but is available in a narrative as part of a physician's note in the medical record, the ECG along with the narrative can be used to support coding this risk factor.

Interpretation:

ECG Evidence of LVH	CODE	DO NOT CODE
1. ECG reads minimal voltage criteria for LVH, may be normal variant.		X
2. Transesophageal Echo (TEE) for LVH		X
3. Echo diagnosis for patients with LBBB or who are paced	X	
4. ECG reads moderate voltage criteria for LVH, may be normal variant	X	
5. ECG reads LVH with no mention of voltage criteria	X	
6. ECG present, but without any written interpretation		X

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

If there is documentation to support coding both "Congestive Heart Failure, Current" and "Congestive Heart Failure, Past" – then *CODE BOTH* risk factors.

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.

V. Pre-Operative Risk Factors (Cont.)

20. Malignant Ventricular Arrhythmia

Recent *(within the past 7 days)* recurrent ventricular tachycardia or ventricular fibrillation requiring electrical defibrillation or the use of intravenous antiarrhythmic agents. **Excludes** a single episode of V-Tach or V-Fib occurring within 6 hours of the diagnosis of a myocardial infarction and responding well to treatment.

Interpretation:

Malignant Ventricular Arrhythmia	CODE	DO NOT CODE
1. Patient has ventricular bigeminy and treated with IV antiarrhythmic.	X	
2. Patient has chronic sustained V-tach treated with Mexitril (an oral medication, rather than IV) but has sustained V-tach.	X	
3. PVC's treated with Lidocaine.		X
4. V-Fib x2 in ambulance while having an MI. D-fib x2 with no further episodes.		X
5. The patient experienced V-tach arrest requiring D-Fib, IV Lidocaine given during an evolving MI.		X
6. 20 beat run of V-tach, treated with Lidocaine. No recurrent episodes for medication.		X
7. Arrhythmia not an ongoing problem by time of cardiac intervention. Episode only in context of admitting acute ischemic event.		X

If the Malignant Ventricular Arrhythmia occurs within 6 hours of a diagnosed MI, ***DO NOT*** code.

If the patient has an AICD that is *documented* to have fired then ***CODE***.

The duration of the event ***MUST*** be documented. There ***MUST*** be recurrent episodes. A single episode should ***NOT*** be coded.

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 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. Hyperinflated lungs, wheezing		X
4. Fibrotic lungs on chest X-Ray		X
5. Hyperinflated lungs at operation		X
6. Although admitting notes state no history of COPD, documentation in the chart elsewhere as well as chest X-Ray results and a smoking history are apparent		X
7. Patient has a history of asthma, is on bronchodilator and asthma meds	X	
8. Chart states asthma without medications		X
9. Sleep Apnea without any of the above criteria		X

22. Myocardial Rupture

Acute rupture of any of the following:

> Ventricular septum (*post-infarction VSD*)
> Mitral papillary muscle
> Left ventricular free wall

V. Pre-Operative Risk Factors (Cont.)

23. Extensively Calcified Ascending Aorta

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.

Interpretation:

Documentation in the medical record must *CLEARLY* state that it is the ascending aorta that is calcified. *Descending aorta should not be included.*

Chest X-Rays alone are *NOT* sufficient documentation to code this risk factor.

Acceptable documentation can include, but is not limited to the following:

- Statement that the patient has severe ascending aorta calcification.
- Statement that a catheter was unable to be inserted due to calcification in the ascending aorta.

24. 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.

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.

V. Pre-Operative Risk Factors (Cont.)

26. Renal Failure, Creatinine > 2.5 mg/dl

Pre-operative creatinine > 2.5 mg/dl.

Interpretation:
If the patient has at least one creatinine > 2.5 mg/dl prior to the intervention then code.

No matter how many renal transplants the patient has had, if the creatinine *DOES NOT* have at least one value >2.5 mg/dl during this admission, prior to the intervention, *DO NOT* code.

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 HIV/AIDS.

V. Pre-Operative Risk Factors (Cont.)

29. IABP (Intra-Aortic Balloon Pump) Pre-Op

The patient arrives in the operating room with an intra-aortic balloon pump in place, or requires its insertion prior to the induction of anesthesia, for ongoing myocardial ischemia, left ventricular failure, or shock. Clinical evidence of which should be contained in the patient's medial record.

Interpretation:

"IABP Pre-op" can be coded if it is inserted at the same time anesthesia is being started.

The following scenario **WOULD NOT** be coded:

> IABP inserted at Hospital A. IABP removed before transfer to Hospital B. Surgery was done at Hospital B.

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.

33. PCI Before this Admission

The patient has had a PCI before this admission.

V. Pre-Operative Risk Factors (Cont.)

34. Thrombolytic Therapy within 7 days

Thrombolytic therapy such as streptokinase, urokinase, or thromboplastin activator (*TPA*) for the purpose of dissolving a coronary thrombosis within seven days prior to surgery.

35. Smoking History, in past 2 weeks

The patient has used any tobacco products within the past two weeks.
The use of chewing tobacco would be included here.

36. Smoking History, in past year

The patient has used any tobacco products within the past year.
The use of chewing tobacco would be included here.

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.

V. Pre-Operative Risk Factors (Cont.)

The following risk factors are ONLY required for valve patients.

61. Cardiomegaly

C-T ratio greater than 50%, determined from the chest x-ray.

62. Active Endocarditis

Two or more positive blood cultures without other obvious source, 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.

VI Person Completing Report

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/ Petric Campus
1164	Bronx-Lebanon Hospital Center, Fulton Division
1286	Brookdale Hospital Medical Center
1288	The Brooklyn Hospital Center, Downtown Campus
0207	Buffalo General Hospital – Kaleida Health
3013	Catholic Medical Center of Brooklyn & Queens Mary Immaculate Hospital
1634	Catholic Medical Center of Brooklyn & Queens – St. John's Queens Hosp
0977	Cayuga Medical Center at Ithaca
0135	Champlain Valley Physicians Hospital Medical Center
0208	Children's Hospital – Buffalo – Kaleida Health
1626	City Hospital Center at Elmhurst
1294	Coney Island Hospital
0636	Crouse Medical Center
0829	Ellis Hospital
0210	Erie County Medical Center
0407	Genesee Hospital – Rochester
1005	Glens Falls Hospital
0779	Good Samaritan Hospital of Suffern
0925	Good Samaritan Hospital Medical Center – West Islip
1445	Harlem Hospital Center
0913	Huntington Hospital
1300	Interfaith Medical Center, Jewish Hosp. Med. Ctr. of Brooklyn Division
1629	Jamaica Hospital
1450	Lenox Hill Hospital

ATTACHMENT A

PFI NUMBERS FOR CARDIAC DIAGNOSTIC AND SURGICAL CENTERS

PFI #	HOSPITAL *(continued)*
1302	Long Island College Hospital
1630	Long Island Jewish Medical Center - North Shore-LIJ Health System
1304	Lutheran Medical Center
1305	Maimonides Medical Center
0746	Mary Imogene Bassett Hospital
0213	Mercy Hospital – Buffalo
0215	Millard Fillmore Hospital – Kaleida Health
3058	Montefiore Med. Ctr., Jack D. Weiler Hosp. of A. Einstein College Div.
1169	Montefiore Medical Center, Henry & Lucy Moses Division
1456	Mount Sinai Hospital
0528	Nassau County Medical Center
1458	New York Cornell Hospital – NY Presbyterian Medical Center
1637	The New York Hospital Medical Center of Queens *(formerly Booth Memorial)*
1306	The New York Methodist Hospital *(formerly Methodist Hospital of Brooklyn)*
1463	NYU Medical Center
0541	North Shore University Hospital - North Shore-LIJ Health System
0066	Olean General Hospital – Main
0471	Park Ridge Hospital
1464	Presbyterian Hospital - NY Presbyterian Medical Center
0411	Rochester General Hospital – Via Heath
0367	Samaritan Medical Center
0818	Saratoga Hospital
1072	Sound Shore Medical Center
0527	South Nassau Communities Hospital
0924	Southside Hospital
1176	St. Barnabus Hospital
0598	St. Elizabeth Hospital
0563	St. Francis Hospital – Roslyn
0870	St. James Mercy Hospital

ATTACHMENT A

PFI NUMBERS FOR CARDIAC DIAGNOSTIC AND SURGICAL CENTERS

PFI #	HOSPITAL *(continued)*
0943	St. Catherine of Siena Medical Center (Formerly St. John's Episcopal Hospital)
0630	St. Joseph's Hospital Health Center – Syracuse
0599	St. Luke's Memorial Hospital Center – New Hartford
1466	St. Luke's Roosevelt Hospital Center, Roosevelt Hospital Division
1469	St. Luke's Roosevelt Hospital, St. Luke's Hospital Division
0005	St. Peter's Hospital
0412	Park Ridge Hospital Genesee Street Campus (Formerly St. Mary's Hospital)
1471	St. Vincent's Hospital and Medical Center of New York
1738	Sister's of Charity @ St. Vincent's (Formerly St. Vincent's Med Ctr of Richmond)
1740	Staten Island University Hospital – North
0413	Strong Memorial Hospital – University of Rochester
0058	United Health Services Wilson Hospital Division
0245	University Hospital – Stony Brook
1320	University Hospital of Brooklyn
0635	State University Hospital of Upstate Medical Center
0181	Vassar Brothers Hospital
1139	Westchester Medical Center, Westchester Med. Ctr. Division
0511	Winthrop-University Hospital
0103	Women'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

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		

**NEW YORK STATE DEPARTMENT OF HEALTH
CARDIAC ADVISORY COMMITTEE**

CONGENITAL AND ACQUIRED HEART DISEASE PROCEDURE

**100-198 Congenital Heart Disease - Operations
Performed *Without* Extracorporeal Circulation**

100 Patent Ductus Arteriosus Closure
101 Coarctation of Aorta Repair
102 Aortic Arch Anomalies Repair
103 Banding of Pulmonary Artery
104 Blalock-Hanlon Septectomy

105 Blalock-Taussig Shunt (*Classical or Modified*)
106 Waterson Shunt
107 Central Shunt
108 Other Shunt

109 Pulmonary Valvotomy (*With Inflow Occlusion*)
110 Aortic Valvotomy (*With Inflow Occlusion*)
111 Vascular Ring Repair

198 Other Operations for Congenital Heart Disease,
        Performed Without Extracorporeal Circulation

**200-398 Congenital Heart Disease - Operations
Performed *With* Extracorporeal Circulation**

200 Atrial Septal Defect, Secundum or Patent Foramen Ovale
201 Atrial Septal Defect, Primum or Patent Foramen Ovale
202 Atrial Septal Defect, Sinous Venosus
203 Partial Anomalous Pulmonary Venous Connection (*PAPVC*)
204 Atrial Septal Defect and PAPVC
205 Atrial Septal Defect and Mitral Valve Repair

Total Anomalous Pulmonary Venous Connection

210 To the Left Innominate Vein
211 To the Superior Vena Cava
212 To the Coronary Sinus
213 To the Right Atrium
214 To the Infradiaphragmatic Vein
218 Mixed
220 Cor Triatrialum or Supravalvular Mitral Stenosis
221 Complete Atrioventricular Canal Defect

Ventricular Septal Defect Repair

230 Single VSD
231 Multiple VSD's
232 VSD Closure and Aortic Incompetence Repair
233 VSD Closure with Straddling or Overriding Tricuspid Valve

Tetralogy of Fallot Repair

240 Tetralogy of Fallot, with Transannular Patch
241 Tetralogy of Fallot, without Transannular Patch
242 Tetralogy of Fallot, with Right Ventricle to Pulmonary Artery Conduit
243 Tetralogy of Fallot, with Pulmonary Atresia
248 Any of the above, with Other Cardiac Procedure

250 Pulmonary Valvotomy
251 Reconstruction of RV Outflow Tract, with Aortopulmonary Shunt
252 Reconstruction of RV Outflow Tract, without Aortopulmonary Shunt

260 Fontan (*or Modified*) Operation
261 Bi-directional Glenn Anastomosis
262 Total Cavo-Pulmonary Derivation

270 Ebstein's Malformation Repair
271 Truncus Arteriosus Repair
272 Aortopulmonary Window Repair
273 Coronary Fistula Closure
274 Anomalous Left Coronary from Pulmonary Artery

Aortic Valve Replacement

280 Mechanical
281 Heterograft
282 Homograft
283 Autograft
288 Other

Aortic Root Replacement

290 Mechanical
291 Homograft
292 Autograft
298 Other

300 Other Operation for Left Ventricular Outlet Obstruction

310 Apical Aortic Conduit
311 Aortoventriculoplasty (*Konno, Pulmonary Autograft*)
312 Aortic Valvotomy
313 Aortic Stenosis, Subvalvular: Resection or Enucleation
314 Aortic Stenosis, Supravalvular
315 Interrupted Aortic Arch Repair

Hypoplastic Left Heart Or Aortic Atresia
---

320 Norwood
321 Other

330 Mitral Valve Repair

Mitral Valve Replacement
---

340 Mechanical
341 Heterograft
348 Other

350 Creation or Enlargement of Atrial Septal Defect

Transposition Of Great Arteries (TGA) and Double Outlet Right Ventricle (DORV)
---

360 Mustard Repair
361 Senning Repair
362 Arterial Switch
363 Arterial Switch and VSD closure
364 Arterial Switch and Other Cardiac Procedure
365 Rastelli Repair
366 Intraventricular Tunnel Repair
367 LV-PA Conduit, with or without Other Cardiac Procedure
378 Other Procedure for TGA or DORV

Single Ventricle Procedures
---

380 Fontan (*or Modified*)
381 Bi-directional Glenn
382 Septation (*Primary or Staged*)
388 Other Procedure for Single Ventricle

390 Cardiac Arrhythmia Surgery

398 Other Operation for Congenital Heart Disease, Performed w/ Extracorporeal Circulation

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

Note: Extracorporeal circulation will be determined from the Cardiopulmonary Bypass Time reported under Procedural Information on the front of the form. Please accurately complete this item for all appropriate cases.

401 Mitral Valvotomy
402 Pericardiectomy
403 Stab Wound of Heart or Great Vessel Repair
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

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

Coronary Artery Bypass Grafts

671-676**Saphenous Vein Graft Only
681-686**Single Artery Graft (*Internal Mammary, Radial, Gastroepopoic, or Other Arterial graft, with or without a Saphenous Vein Graft*)
691-696**Double Artery Graft (*Internal Mammary, Radial, Gastroepopoic, or Other Arterial graft, with or without a Saphenous Vein Graft*)
701-706**Other Graft (*Use for any other combination not listed above; including triple artery grafts*)

** For Coronary Artery Bypass Grafts (671-706), use the third digit to indicate the number of distal anastomoses. If more than 6, list as 6.

Examples: *Saphenous Vein Graft Only; three distal anastomoses: 673*
                    Four saphenous vein anastomoses and double IMA: 696
                    Three saphenous vein grafts and triple IMA: 706

Other Revascularization

710 Transmyocardial Revascularization
712 MAZE Procedure
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

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
748 Other Valve Surgery Plus CABG

Surgery For Complication Of CAD Without CABG

760 Acquired Ventricular Septal Defect
761 Resection or Plication of LV Aneurysm
762 Ventricular Reduction (*Batiste Procedure*)

Aortic Aneurysm Repair/Aortic Root Replacement

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

ATTACHMENT C

Transplant Procedures (Adult and Pediatric)

820 Heart Transplant
821 Heart and Lung Transplant
822 Lung Transplant
823 Ventricular Assist Device (*LVAD, RVAD, BIVAD*)
825 Ventricular Assist Device Placed as a Bridge to Transplant

901 Artificial Heart
902 Pulmonary Embolectomy
903 Stab Wound of Heart or Great Vessel Repair
904 Removal of Intracardiac Tumor
905 Removal of Intracardiac Catheter
906 Repair of Aortic Deceleration Injury *(With Aortofemoral Bypass)*

Other

998 Other Operation for Acquired Heart Disease
       Performed with Extracorporeal Circulation

Form DOH-2254a (12/01)

45

Definitions of CCS Functional Classes

Canadian Cardiovascular Society (CCS) Functional Classification:

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.

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.

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.

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