

**NEW YORK STATE DEPARTMENT OF HEALTH
DIVISION OF PRIMARY & ACUTE CARE SERVICES
CARDIAC SERVICES PROGRAM**

**Instructions and Data Element Definitions
January 2009**

**Cardiac Surgery Report, Pediatric
(Under age 18)
Form DOH-2254p**

CARDIAC SERVICES PROGRAM CONTACTS:

**One University Place, Suite 209
Rensselaer, NY 12144-3455
Phone: (518) 402-1016
Fax: (518) 402-6992**

Paula M. Waselauskas RN MSN, Administrator, pmw03@health.state.ny.us
Kimberly S. Cozzens MA, Cardiac Initiatives Research Manager, ksc06@health.state.ny.us
Rosemary Lombardo MS, CSRS Coordinator, rxl07@health.state.ny.us
Taryn Cronise MA, Clinical Data Coordinator, tlc14@health.state.ny.us

Table of Contents

| Topic | Page |
|--|------|
| Revision Highlights and Coding Clarification | 5 |
| When to Complete a Pediatric CSRS Form | 7 |
| Pediatric CSRS Data Reporting Policies | 8 |
| ITEM-BY-ITEM INSTRUCTIONS | |
| PFI Number | 9 |
| Sequence Number | 9 |
| I. Patient Information | |
| Child's Name | 9 |
| Medical Record Number | 9 |
| Child's Social Security Number | 9 |
| Age in Years | 10 |
| Date of Birth | 10 |
| Sex | 10 |
| Ethnicity | 10 |
| Race | 10 |
| Residence Code | 11 |
| Hospital Admission Date | 11 |
| Primary Payer | 12 |
| Medicaid | 12 |
| PFI of Transferring Hospital | 12 |
| II. Procedural Information | |
| Date of Surgery | 13 |
| Time at Start of Procedure | 13 |
| Primary Surgeon Performing Surgery | 13 |
| Surgical Priority | 13 |
| Prior Surgery this Admission | 14 |
| Cardiac Diagnosis Code | 14 |
| Cardiac Procedure Code | 14 |
| Mode of Cardiopulmonary (CP) Bypass | 14 |
| Minimally Invasive | 15 |
| Entire Procedure Off-Pump | 15 |
| CABG Information | 15 |

Table of Contents (continued)

III. Pre-Operative Status

| | |
|--|----|
| Weight at Time of Operation | 16 |
| Gestational Age at Birth in Weeks | 16 |
| Weight at Birth in Grams | 16 |
| Pre-Operative Conditions (None) | 16 |
| Previous Open Heart Operations | 17 |
| Previous Closed Heart Operations | 17 |
| Pre-Op Interventional Cath Procedure | 18 |
| Severe Cyanosis or Severe Hypoxia | 18 |
| Dialysis within 14 Days Prior to Surgery | 18 |
| Any Ventilator Dependence During Same Admission or within 14 Days | 19 |
| Inotropic Support Immediately Pre-op, within 24 hrs..... | 19 |
| Positive Blood Cultures within 2 Weeks of Surgery | 19 |
| Arterial pH < 7.25 Immediately Pre-op..... | 20 |
| Significant Renal Dysfunction | 20 |
| Trisomy 21 | 20 |
| Major Extracardiac Anomalies | 21 |
| Pulmonary Hypertension | 21 |
| Ventricular Assist – ECMO/IABP/LVAD/RVAD/BIVAD | 22 |
| Pre-existing Neurologic Abnormality | 22 |
| Pneumonia at Time of Surgery..... | 22 |
| Prostaglandin Dependence at Time of Surgery..... | 22 |
| Balloon Atrial Septostomy | 23 |
| Any Previous Organ Transplant | 23 |

IV. Post Procedural Events Requiring Intervention

| | |
|--|----|
| Post Procedural Events (None)..... | 24 |
| Cardiac Tamponade..... | 24 |
| Ventricular Fibrillation or CPR..... | 24 |
| Bleeding Requiring Reoperation..... | 24 |
| Deep Sternal Wound Infection..... | 25 |
| Ventilator Dependency for > 10 Days..... | 25 |
| Clinical Sepsis with Positive Blood Cultures..... | 25 |
| Renal Failure Requiring Dialysis..... | 25 |
| Complete Heart Block at Discharge..... | 26 |
| Unplanned Cardiac Reoperation or Interventional Catheterization..... | 26 |
| New Neurologic Deficit..... | 26 |
| Ventricular Assist – ECMO/IABP/LVAD/RVAD/BIVAD..... | 26 |

Table of Contents (continued)

V. Discharge Information

| | |
|-------------------------------|----|
| Hospital Discharge Date | 27 |
| Discharged Alive to | 27 |
| Died in | 27 |
| 30 Day Status | 27 |

Attachments

| | |
|--|----|
| A: PFI Numbers for Cardiac Diagnostic and Surgical Centers | 28 |
| B: Residence Codes | 31 |
| C: Primary Payer Source | 32 |
| D: Primary Cardiac Diagnosis Codes | 33 |
| E: Congenital and Acquired Cardiac Procedure Codes | 38 |

Revision Highlights and Coding Clarification

Revised Data Elements

The following data elements have been revised effective January 2009. Please see complete definitions in the main text of this document.

Severe Cyanosis or Hypoxia (Page 18) - Report if the criteria are present and sustained within 12 hours prior to surgery.

Arterial pH<7.25 (Page 20) - The pre-op period ends at the first blood gas taken in the OR.

Pulmonary Hypertension (Page 21) – A new definition has been provided for this risk factor.

Major Extra-Cardiac Anomaly (Page 21) -- Report any anomaly felt to be clinically relevant (excluding those on the Do Not Code list). Coordinators will be asked to report the specific condition during validation activities and are advised to keep notes on these conditions at the time of form creation.

Diagnosis Codes (Attachment D) –Diagnosis codes have been added as follows:

- #209 Anomalies of Ventricular Outflow Tracts, Pulmonary Ventricular Outflow Tract, Supravalvar Pulmonary Stenosis,
- #297 Great Vessel Anomalies, Hypoplastic Aortic Arch,
- #163 Atrioventricular Septal Defect, Transitional / Intermediate AV Canal

Procedure Codes (Attachment E) –Procedure codes have been added as follows:

- #348 Great Vessel Anomalies, Aortic Repair (Coarctation or Interruption), End to side anastomosis
- #192 Anomalies of Ventricular Outflow Tract, Pulmonary Valve Replacement, Xenograft

Revision Highlights and Coding Clarification (continued)

Data Clarifications

The following are recent data clarifications or reminders of recent data changes. For all data elements, please consult the main body of this document to obtain the complete data element definition and all relevant notes, interpretations and clarifications.

Procedure codes 398/498/998 “Other” should not be reported for procedures that are not cardiac, or that are not surgical. Examples of procedures that should not be reported as “Other” are chest tube insertion, thoracic duct ligation, mediastinal exploration.

ECMO (procedure code 834) should only be reported when there is a PedCSRS reportable case during the Admission. This should be reported regardless of physical location or clinical staff responsible. It is not necessary to report discontinuation of ECMO as a procedure.

Pericardial Windows are not reportable in PedCSRS.

PRISMA for fluid management while on ECMO does not constitute renal failure as a risk factor or major event.

Deep Sternal Wound Infection should only be reported when there is sternal instability.

Previous Open Heart Operations refers to surgeries using CP Bypass and Previous Closed Heart Operations refers to those without CP Bypass.

Nasal CPAP is not reportable as Pre-operative ventilator dependence.

All diagnoses that apply to a patient, even those that have had a previous surgical correction, should be reported.

Revision Highlights and Coding Clarification (continued)

When to Complete a Pediatric CSRS Form

Complete a Pediatric Cardiac Surgery Reporting System (Pediatric CSRS) form for every patient under the age of 18 at the time of admission undergoing one or more operations **on the heart or great vessels**, with or without extracorporeal circulation.

If more than one cardiac surgery occurred during a single hospital stay, **complete a separate form for each visit to the operating room.**

ISOLATED PATENT DUCTUS ARTERIOSUS: A pediatric CSRS form should **NOT** be completed if the patient has had an isolated Patent Ductus Arteriosus (PDA) repair when the patient is less than 1500 grams at the time of operation **OR** has had a PDA repair any place but the operating room, regardless of size.

Do not complete a form for implantations of pacemakers, AICD, or other procedures done in the catheterization lab.

Do not complete a form for ECMO when there was no cardiac surgery during the hospital admission. Do not report removal from ECMO.

Do not complete a form for Pericardial Window.

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

Pediatric CSRS Data Reporting Policies

Hospice Policy

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 to hospice, 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 doctor's 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.

Reporting Schedule

Pediatric CSRS data is reported quarterly by discharge date. It is due to the Cardiac Services Program two months after the end of the quarter. The 2009 reporting schedule is as follows.

Quarter 1 (1/1/09 – 3/31/09 Discharges) due on or before May 31, 2009
Quarter 2 (4/1/09 – 6/30/09 Discharges) due on or before August 31, 2009
Quarter 3 (7/1/09 – 9/30/09 Discharges) due on or before November 30, 2009
Quarter 4 (10/1/09 – 12/31/09 Discharges) due on or before February 28, 2010

Limited extensions to the above deadlines will be granted on a case by case basis when warranted by extenuating circumstances. They must be requested in writing prior to the required submission date.

Item-by-Item Instructions

PFI Number

Variable Name: PFI

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

Variable Name: SEQUENCE

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 Pediatric 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

Child's Name

Variable Names: LASTNAME, FIRSTNAME

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

Medical Record Number

Variable Name: MEDRECNO

Enter the child's medical record number.

Child's Social Security Number

Variable Name: SSNO

Enter the child's social security number.

Patient Information (continued)

Age in Years

Variable Name: AGE

Enter the child's age at admission to the hospital. If the child is less than one year old, enter "0". If the child is admitted on or after his/her 18th birthday, please complete an Adult CSRS form NOT a Pediatric CSRS form.

Date of Birth

Variable Name: DOB

Enter the child's exact date of birth.

Sex

Variable Name: SEX

Check the appropriate box.

Ethnicity

Variable Name: ETHNIC

Check the appropriate box.

Race

Variable Names: RACE, RACESPEC

Select one of the following.

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.

Patient Information (continued)

Race, cont.

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. Please provide the specific race for any case marked "Other."

Note: Please note that race should be based on the patient's racial/ethnic origins, which is not necessarily the same as their country or place of origin.

Multi-racial can be indicated by checking "8-Other" and providing details in the "specify" field.

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

Residence Code

Variable Names: RESIDENC, STATE

Enter the county code of the patient's principal residence, as shown in Attachment B. If the patient lives outside of 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 **should** 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 while in the United States.

Hospital Admission Date

Variable Name: ADMIDATE

Enter the date that the current hospital stay began.

Patient Information (continued)

Primary Payer

Variable Name: PAYER

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

Interpretation: Primary Payer and Medicaid

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

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. Use Code 19 for any other type of insurance that is not given a code of its own (e.g. Corrections).

Code a PPO (Preferred Provider Organization) as Code 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.

Medicaid

Variable Name: 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.

PFI of Transferring Hospital

Variable Name: TRANS_PFI

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://hospitals.nyhealth.gov> for a complete listing of NYS hospitals, including their PFI.

II. Procedural Information

REMINDER: Complete a separate pediatric cardiac surgery form for each visit to the operating room involving a surgery of the heart or great vessels during the current hospital admission.

Date of Surgery

Variable Name: SURGDATE

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

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

Time at Start of Procedure

Variable Names: SURGHOUR, SURGMIN

For time at start of procedure, enter the time of the induction of anesthesia using military time (e.g. 1:00 am is 01:00, and 1:00 pm is 13:00).

Primary Surgeon Performing Surgery

Variable Name: PHYSNUM

Enter the name and medical license number of the primary or principal surgeon who performed the cardiac surgical procedure(s).

Surgical Priority

Variable Name: 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.

This includes patients with ductal-dependent systemic or pulmonary circulation.

Emergency: Patients with cardiac compromise or circulatory compromise of the cardiac organ.

Typical emergency patients include those with obstructed anomalous pulmonary venous return and those with ductal-dependent systemic or pulmonary circulation in whom ductal patency cannot be maintained.

II. Procedural Information (continued)

Prior Surgery this Admission

Variable Names: PRIOSURG, PRIODATE

Check the appropriate box to indicate whether the patient went to the operating room for any cardiac operation prior to the present operating room visit during the current hospital admission.

If "Yes" then the date of the most recent previous cardiac operation **MUST** be entered.

Cardiac Diagnosis Code

Variable Names: DIAG1, DIAG2, DIAG3, DIAG4, DIAG5

Enter the 3-digit State Cardiac Advisory Committee Code (SCAC) from the diagnosis code list in Attachment D - Primary Cardiac Diagnosis Codes.

List up to 5 diagnoses. Please list all cardiac diagnoses, regardless of whether or not a procedure is being done to alleviate the condition. If there are more than 5 diagnoses, list the ones that are being corrected first and then list the remaining in order of severity.

Cardiac Procedure Code

Variable Names: PROC1, PROC2, PROC3, PROC4

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

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

If there are more, list the 4 most significant.

Note: Interval Procedures indicate a palliative procedure, temporizing procedure, or one step in a staged procedure. Codes for these procedures are included in Attachment E.

Mode of Cardiopulmonary (CP) Bypass

Variable Name: LOWFLOW, DEEPHYPO, CIRCARES

Check all that apply. If none apply leave blank.

II. Procedural Information (continued)

Minimally Invasive

Variable Name: MINI_INV

If the cardiac surgical procedure began through an incision other than a complete sternotomy or thoracotomy check "Yes", regardless of whether the case was converted to a standard incision or CP Bypass was used. Otherwise check "No".

Entire Procedure Off Pump

Variable Name: ALL_OFF

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

CABG Information

Variable Names: TOT_COND, ART_COND, DISTAL

If Procedure Code 670 is coded 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.

III. Pre-Operative Status

Weight at Time of Operation

Variable Names: WGT_UNIT, WEIGHT

Enter the patient's weight at the time of the operation. If less than 10 kilograms, report in grams, if 10 kilograms or more report in kilograms. Check the appropriate box for grams or kilograms.

Gestational Age at Birth in Weeks

Variable Name: GEST_AGE

If the patient is under one year of age at admission, enter the gestational age at birth (in weeks).

If the patient's age at admission was one year or more, this item should be left blank.

Weight at Birth in Grams

Variable Names: BIRTHWGT

If the patient is under one year of age at admission, check the box with the appropriate weight range in grams. If the patient's age at admission was one year or more, this item should be left blank.

Pre-operative Conditions

Check all of the following conditions that existed prior to the start of the procedure, but within the time frame specified.

0. None

Variable Name: NORISK

None of the pre-operative conditions listed below were present prior to surgery.

III. Pre-Operative Status (continued)

1-3. Previous Open Heart Operations

Variable Names: PREVOP_1, PREVOP_2, PREVOP_3

If the patient had an open-heart surgery prior to the current cardiac operation, check the appropriate box to indicate the number of such operations.

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

“Previous Open Heart Operations” refers to surgeries using CP Bypass and “Previous Closed Heart Operations” refers to those without CP Bypass.

Include any previous surgeries, either from this admission or a previous admission.

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

4-6. Previous Closed Heart Operations

Variable Names: PRECLO_1, PRECLO_2, PRECLO_3

If the patient had a closed heart surgery prior to the current cardiac operation, check the appropriate box to indicate the number of such operations.

Interpretation: “Previous Open Heart Operations” refers to surgeries using CP Bypass and “Previous Closed Heart Operations” refers to those without CP Bypass.

Include any previous surgeries, either from this admission or a previous admission.

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

III. Pre-Operative Status (continued)

7. Pre-op Interventional Cath Procedure

Variable Names: PRE_CATH, INT_DATE

Indicate if the patient has had a pre-operative interventional cardiac catheterization procedure.

If during this admission, enter the date of the most recent procedure in the space provided.

Interpretation: Examples of these procedures include but are not limited to coil embolization of collaterals, balloon valvuloplasty, balloon dilation of coarctation of the aorta, defect closure, pulmonary artery, systemic vein or pulmonary vein. Balloon atrial septostomy would be excluded.

Report this risk factor if the patient underwent a cardiac intervention in-utero (e.g. aortic valve dilation).

11. Severe Cyanosis or Severe Hypoxia

Variable Name: SEV_CYAN

Code if any of the following are present and sustained within 12 hours prior to surgery:

Pulse oximetry saturation <70%

Resting PO₂ < 35mmHg

Arterial saturation <75%

Interpretation: The following scenario **would** be coded: Medical record states: "the patient's baseline oxygen saturation is 68% on room air. Central Aorto-Pulmonary Shunt placed for full repair due to cyanosis."

12. Dialysis within 14 Days Prior to Surgery

Variable Name: DIAL_PRE

Code if the patient received either continuous or intermittent hemodialysis or peritoneal dialysis within 14 days prior to surgery. The dialysis does not have to occur in the same hospital stay, it only has to be within 14 days of the procedure.

Note: You may also code this element if the patient had Continuous Renal Replacement Therapy (CRRT, PRISMA) within 14 days prior to surgery. Do not report this risk factor if the patient is on PRISMA for fluid management while on ECMO.

III. Pre-Operative Status (continued)

13. Any Ventilator Dependence During the Same Admission or Within 14 Days Prior to Surgery

Variable Name: VENT_PRE

Code if the patient was ventilator dependent during the same admission *or* within 14 days prior to surgery.

Interpretation: The following scenario **would** be coded because surgery occurred in the same admission as ventilator dependence even though there was 16 days between ventilator dependence and surgery:

Admitted on 5/15
Ventilator dependent on 6/1
Extubated on 6/10
Surgery on 6/26
Discharged no 6/30

The following scenario **would NOT** be coded because more than 14 days passed between ventilator dependence and surgery:

Admitted on 5/15
Ventilator dependent on 6/1
Extubated on 6/10
Discharged on 6/13
Admitted on 6/20
Surgery on 6/26
Discharged on 6/30

Nasal CPAP is not considered pre-operative ventilator dependence.

14. Inotropic Support Immediately Pre-op within 24 hrs

Variable Name: INOT_PRE

Code if either of the following is present in the patient's medical record:

Dopamine in dosage >5 mcg/kg/minute
Any other agent/dose for inotropic support

15. Positive Blood Cultures within 2 Weeks of Surgery

Variable Name: POS_BLOO

Code if the patient has had positive blood cultures that are documented in the medical record, occurring within 2 weeks prior to surgery.

Interpretation: This can be coded even if the patient had the positive blood cultures within 2 weeks of surgery, was discharged, and was then re-admitted for surgery.

III. Pre-Operative Status (continued)

16. Arterial pH < 7.25, Immediately Pre-Op Within Hospital Stay

Variable Name: ARTER_PH

Arterial pH is < 7.25 within 12 hours prior to surgery but before the first blood gas taken in the OR.

17. Significant Renal Dysfunction

Variable Name: RENA_DYS

Code if Creatinine levels reach the indicated range for the patient's age:

| | |
|----------------------|------------------------|
| Preemies and Newborn | Creatinine >1.5 mg /dl |
| >1 month of age | Creatinine >2.0 mg/dl |

18. Trisomy 21

Variable Name: DOWN_SYN

Code for any patients with Trisomy 21 (Down's Syndrome).

III. Pre-Operative Status (continued)

19. Major Extracardiac Anomalies

Variable Name: *CARDANOM*

Report any anomaly, not already captured on the PedCSRS form, felt to be clinically relevant.

Examples include but are not limited to:

| | |
|--|---------------------------------|
| Non-Down's Syndrome chromosomal abnormalities | Tracheo-esophageal (TE) fistula |
| DiGeorge's Syndrome | Choanal Atresia |
| Cystic Fibrosis | Diaphragmatic hernia |
| Marfan's Syndrome | Biliary Atresia |
| Sickle Cell Anemia | Any -ostomy |
| Blood Dyscrasia | Beecher Muscular Dystrophy |
| Omphalocele | Tethered Spinal Cord |
| Hypoplastic lung | Vater Syndrome |
| | Pierre Robin Syndrome |

The following would *not* be accepted as Major Extracardiac Anomalies:

| | |
|-------------------------|----------------------|
| Failure to Thrive | Normothermic |
| Developmentally Delayed | Cleft lip/palate |
| Hepatomegaly | Hirschsprung Disease |
| Preemie | Legally blind |
| Jaundiced | |

Note: As part of the data validation process, you will be asked to specify the nature of the "Major Extracardiac Anomaly." Please keep notes on cases with this risk factor to facilitate this validation.

21. Pulmonary Hypertension

Variable Name: *PULM_HYP*

In the case of an unrestrictive ventricular or great vessel (e.g., ductus or AP window) communication, the following would constitute evidence of increased PVR (and hence presence of the risk factor):

- bidirectional shunting (meaning at least some R to L shunting) across the defect
- OR
- absence of CHF symptoms in patients at least 2 months of age
- OR
- evidence of systemic or suprasystemic RV pressure by tricuspid regurgitant jet velocity in the absence of a moderate or large left to right shunt

III. Pre-Operative Status (continued)

22. Ventricular Assist

Variable Name: PREOPVAD

Code if any of the following were used prior to the procedure to maintain vital signs:

Extracorporeal Membrane Oxygenation (ECMO)
Intra-Aortic Balloon Pump (IABP)
Left Ventricular Assist Device (LVAD)
Right Ventricular Assist Device (RVAD)
Bi-Ventricular Assist Device (BIVAD)

24. Pre-existing Neurologic Abnormality

Variable Name: NEUROABN

Pre-existing neurological abnormality includes but is not limited to:

Documented intracranial bleed
Hydrocephalus
Chiari Malformation
Arterial venous malformation
Cerebral vascular accident (CVA)
Seizure disorders

25. Pneumonia at Time of Surgery

Variable Name: PNEUMONI

As evidenced by: Chest X-ray with infiltrate

and at least **ONE** of the following:

- *temperature greater than 101°F (38.5°C)
- *white blood count greater than 12,000
- *positive blood culture/viral titer

26. Prostaglandin Dependence at Time of Surgery

Variable Name: PROSTAGL

At the time of surgery, the child requires prostaglandin to maintain normal respiration.

III. Pre-Operative Status (continued)

27. Balloon Atrial Septostomy

Variable Name: BALLSEPT

Prior to surgery, but within the same hospital admission, the patient had a balloon atrial septostomy.

28. Any Previous Organ Transplant

Variable Name: ORGN_TRA

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 and/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).

IV. Post-Procedural Events Requiring Intervention

Check all of the listed post-procedural events that occurred following the surgery.

Please Note: A documented pre-operative condition that persists post-operatively with **NO** increase in severity is **NOT** a post-procedural event.

0. None

Variable Name: *NOEVENTS*

Check if none of the post-procedural events listed below occurred following the operation.

1. Cardiac Tamponade

Variable Name: *CARDTAMP*

Code if cardiac tamponade is present post procedure.

Interpretation: Cardiac Tamponade should be coded if there is post-op chest drainage. Code regardless of where the drainage was performed (operating room, bedside, etc.).

2. Ventricular Fibrillation or CPR

Variable Name: *VENT_FIB*

Code if the patient experiences V-Fib or requires CPR at any time post-procedure, but before hospital discharge.

3. Bleeding Requiring Reoperation

Variable Name: *BLEDREOP*

Unplanned reoperation to control bleeding or to evacuate large hematomas in the thorax or pericardium.

Interpretation: This should be coded no matter where the bleeding was controlled (i.e., ICU, OR, bedside).

IV. Post-Procedural Events Requiring Intervention (continued)

4. Deep Sternal Wound Infection

Variable Name: DSW_INF

Drainage of purulent material from the sternotomy or thoracotomy wound.

Report this event only when associated with instability of the sternum.

A sternal wound infection should be reported as a post-procedural event even if it does not become apparent until after the patient is discharged from the hospital.

NOTE: This event is reportable up to one-year post-procedure, regardless of when the patient was discharged.

6. Ventilator Dependency > 10 Days

Variable Name: VENDEP10

The patient is unable to be extubated within 10 days post procedure.

DO NOT report if the patient had been ventilator dependent within 14 days prior to surgery.

7. Clinical Sepsis with Positive Blood Cultures

Variable Name: SEPSIS

Report if either of the following is present post procedure:

Temperature over 101° F (38.5° C) **and** Increased WBC **and** Positive blood culture

OR

Temperature below 98.6°F (37°C) **and** Decreased WBC **and** Positive blood culture

11. Renal Failure Requiring Dialysis

Variable Name: DIALYSIS

Code if the patient requires either continuous or intermittent hemodialysis or peritoneal dialysis post-procedure. Also code if the patient requires Continuous Renal Replacement Therapy (CRRT), for example Primsa, post-procedure.

DO NOT code if the patient required dialysis (or CRRT) within 14 days before the procedure.

IV. Post-Procedural Events Requiring Intervention (continued)

12. Complete Heart Block at Discharge

Variable Name: COMP_HB

Code if the heart block lasts until the time of discharge with or without permanent pacemaker insertion before discharge.

13. Unplanned Cardiac Reoperation or Interventional Catheterization

Variable Name: UP_REOP

Includes any unplanned cardiac reoperation or interventional catheterization.

The procedure can be done in the operating room, cath lab, or at the bedside.

This would **exclude** a reoperation to control bleeding.

15. New Neurologic Deficit

Variable Name: NEURODEF

New neurologic deficit **present at discharge**.

16. Ventricular Assist

Variable Name: POST_VAD

Code if any of the following were required after the procedure to maintain vital signs:

Extracorporeal Membrane Oxygenation (ECMO)

Intra-Aortic Balloon Pump (IABP)

Left Ventricular Assist Device (LVAD)

Right Ventricular Assist Device (RVAD)

Bi-Ventricular Assist Device (BIVAD)

DO NOT Code if Pre-Operative Status #22 or procedure codes 830 – 840 are also coded.

V. Discharge Information

Hospital Discharge Date

Variable Name: *DISDATE*

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.

Discharged Alive To

Variable Name: *STATUS, DISWHERE*

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 8 under "Revision Highlights and Coding Clarifications"

"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

Variable Name: *STATUS, DISWHERE*

Check the appropriate box.

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

30 Day Status

Variable Name: *THIRTYDAY*

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

Attachment A

PFI Numbers for Cardiac Diagnostic and Surgical Centers

PFI Facility

ALBANY AREA

0001 Albany Medical Center Hospital
0135 Champlain Valley Physicians Hospital Medical Center
0829 Ellis Hospital
1005 Glens Falls Hospital
0746 Mary Imogene Bassett Hospital
0755 Rensselaer Regional Heart Institute – St. Mary's
0756 Rensselaer Regional Heart Institute – Samaritan
0818 Saratoga Hospital
0005 St. Peter's Hospital

BUFFALO AREA

0207 Buffalo General Hospital
0208 Children's Hospital of Buffalo
0210 Erie County Medical Center
0213 Mercy Hospital of Buffalo
0215 Millard Fillmore Gates
0103 Women's Christian Association

ROCHESTER AREA

0116 Arnot Ogden Medical Center
0471 Park Ridge Hospital
0411 Rochester General Hospital
0413 Strong Memorial Hospital

SYRACUSE AREA

0977 Cayuga Medical Center at Ithaca
0628 Community General
0636 Crouse Hospital
0599 Faxton-St. Luke's Healthcare, St. Luke's Division
0367 Samaritan Medical Center
0598 St. Elizabeth Medical Center
0630 St. Joseph's Hospital Health Center
0058 United Health Services Hospital, Inc.-Wilson Hospital Division
0635 University Hospital SUNY Health Science Center (Upstate)

Attachment A (continued)

PFI Numbers for Cardiac Diagnostic and Surgical Centers

PFI Facility

NEW ROCHELLE AREA

0989 Benedictine Hospital
0779 Good Samaritan Hospital-Suffern
0925 Good Samaritan Hospital Medical Center-West Islip
0913 Huntington Hospital
0513 Mercy Medical Center
0528 Nassau University Medical Center
0541 North Shore University Hospital
0686 Orange Regional Medical Center
1072 Sound Shore Medical Center-Westchester
0527 South Nassau Communities Hospital
0924 Southside Hospital
0943 St. Catherine of Siena Medical Center
0563 St. Francis Hospital (aka St. Francis Hospital The Heart Center, Roslyn)
0180 St. Francis Hospital (aka St. Francis Hospital & Health Ctrs, Poughkeepsie)
0694 St. Luke's Cornwall Hospital/Newburgh
0245 Stony Brook University Hospital
0990 The Kingston Hospital
0181 Vassar Brothers Medical Center
1139 Westchester Medical Center
1045 White Plains Hospital Center
0511 Winthrop University Hospital

NY CITY AREA

1438 Bellevue Hospital Center
1439 Beth Israel Medical Center / Petrie Campus
1164 Bronx-Lebanon Hospital Center-Fulton Division
1286 Brookdale Hospital Medical Center
1288 Brooklyn Hospital Center-Downtown
1626 City Hospital Center-Elmhurst
1294 Coney Island Hospital
1445 Harlem Hospital Center
1300 Interfaith Medical Center, Jewish Hospital Medical Center of
Brooklyn Division
1165 Jacobi Medical Center
1629 Jamaica Hospital Medical Center
1301 King's County Medical Center
1450 Lenox Hill Hospital
1302 Long Island College Hospital
1630 Long Island Jewish Medical Center
1304 Lutheran Medical Center
1305 Maimonides Medical Center

Attachment A (continued)

PFI Numbers for Cardiac Diagnostic and Surgical Centers

PFI Facility

NY CITY AREA (CONT.)

- 3058 Montefiore Medical Center-Jack D. Weiler Hospital of
A. Einstein College Division
 - 1169 Montefiore Medical Center-Henry and Lucy Moses Division
 - 1456 Mount Sinai Hospital
 - 1637 NY Hospital Medical Center of Queens
 - 1306 NY Methodist Hospital
 - 1464 NY Presbyterian-Columbia Presbyterian Center
 - 1458 NY Presbyterian-NY Weill Cornell Center
 - 1463 NYU Medical Center
 - 2968 North General Hospital
 - 1176 St. Barnabas Hospital
 - 1466 St. Luke's Roosevelt Hospital Center-Roosevelt Hospital Division
 - 1469 St. Luke's Roosevelt Hospital-St. Luke's Hospital Division
 - 1740 Staten Island University Hospital-North
 - 1634 SVCMC-St. John's Queens
 - 1471 SVCMC-St. Vincent's Manhattan
 - 1738 SVCMC-St. Vincent's Staten Island
 - 1320 University Hospital of Brooklyn
 - 1318 Wyckoff Heights Medical Center
-
- 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)

A complete listing of NYS hospitals, including their PFI can be found at:
<http://hospitals.nyhealth.gov/> .

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 Putnam |
| 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

Primary Cardiac Diagnosis Codes NYSDOH Cardiac Advisory Committee

Atrial Situs Anomalies

- 010 Situs Inversus
- 011 Situs Ambiguous/Heterotaxy Syndrome

Cardiac Position Anomalies

- 020 Dextrocardia
- 021 Mesocardia
- 022 Ectopia cordis

Anomalies of Pulmonary Veins

- 100 Partial Anomalous Return
Total Anomalous Return
- 101 Supracardiac
- 102 Cardiac
- 103 Infracardiac
- 104 Mixed
- 105 Pulmonary Vein Stenosis
- 106 Cor Triatriatum

Anomalies of Atrial Septum

- 110 Secundum ASD
- 111 Single Atrium
- 112 Unroofed Coronary Sinus
- 113 Sinus Venosus ASD
- 114 PFO

Attachment D

Primary Cardiac Diagnosis Codes (continued)

Anomalies of Atrioventricular Valve(s)

| | |
|-----|-------------------------------|
| | Tricuspid Valve |
| 120 | Ebstein's Anomaly |
| 121 | Tricuspid Stenosis |
| 122 | Tricuspid Regurgitation |
| 123 | Straddling Tricuspid Valve |
| | Mitral Valve |
| 130 | Supravalvular Mitral Stenosis |
| 131 | Valvular Mitral Stenosis |
| 132 | Subvalvular Mitral Stenosis |
| 133 | Mitral Regurgitation |
| 134 | Straddling Mitral Valve |
| 135 | Papillary Muscle Abnormality |
| | Common AV Valve Abnormality |
| 140 | Stenosis |
| 141 | Regurgitation |
| 142 | Malaligned |

Anomalies of Ventricular Septum

| | |
|-----|------------------------------------|
| 150 | Perimembranous VSD |
| 151 | Doubly committed VSD (Subarterial) |
| 152 | Inlet VSD |
| 153 | Muscular VSD |
| 154 | Multiple VSDs |
| 155 | Malalignment VSD |

Atrioventricular Septal Defects (AVSD)

| | |
|-----|--------------------------------------|
| 160 | Partial AVSD (Primum ASD) |
| 163 | Transitional / Intermediate AV Canal |
| | Complete AVSD |
| 161 | Balanced |
| 162 | Unbalanced |

Attachment D

Primary Cardiac Diagnosis Codes (continued)

Univentricular Heart (Single Ventricle)

- 170 Double/Common Inlet LV
- 171 Double/Common Inlet RV
 - Tricuspid Atresia
- 172 With IVS
- 173 With VSD
- 174 With TGA
- 175 Mitral Atresia
- 176 Indeterminate Ventricle
 - Hypoplastic Right Ventricle
- 180 Pulmonary atresia with IVS
- 181 Other type of hypoplastic RV
 - Hypoplastic Left Ventricle
- 190 Classical HLHS (Aortic Atresia w/ Hypoplastic LV)
- 191 Any other Hypoplastic LV

Anomalies of Ventricular Outflow Tracts

- 200 Pulmonary Ventricular Outflow Tract
 - 201 Pulmonary Valve Stenosis
 - 209 Supravalvar Pulmonary Stenosis
 - 202 Subvalvular/Infundibular Pulmonary Stenosis
 - 203 Double Chamber Right Ventricle
 - 204 Branch Pulmonary Artery Stenosis
 - 205 Hypoplastic Pulmonary Arteries
 - 206 Pulmonary Valve Regurgitation
 - 207 Main Pulmonary Artery Atresia
 - 208 Branch Pulmonary Artery Atresia
- Aortic Ventricular Outflow Tract
 - 210 Valvular Aortic Stenosis
 - Subvalvular Aortic Stenosis
 - 211 Discrete
 - 212 Long Segment/Tunnel
 - 220 Supravalvular Aortic Stenosis
 - 230 Aortic Valve Atresia
 - 231 Aortic Valve Regurgitation
 - 232 Aorto-Ventricular Tunnel

Tetralogy of Fallot (TOF)

- 240 RV-PA Continuity
- 241 TOF with Pulmonary Valve Atresia
- 242 Absent Pulmonary Valve Syndrome

Attachment D

Primary Cardiac Diagnosis Codes (continued)

Truncus Arterious

- 250 Type I
- 251 Type II
- 252 Type III

Transposition of the Great Arteries (TGA)

- 260 D-TGA
- 261 Congenitally Corrected Transposition

Double Outlet Right Ventricle (DORV)

- 270 Subaortic VSD
- 271 Subpulmonic VSD
- 272 Uncommitted VSD
- 273 Doubly Committed VSD
- 274 Restrictive VSD

Great Vessel Anomalies

- 280 Aortopulmonary Window
- 281 Patent Ductus Arteriosus
- 282 Origin of L/R PA from Aorta
- 283 Sinus of Valsalva Aneurysm/Fistula
- 284 Aortic Coarctation
- 297 Hypoplastic Aortic Arch
- 285 Aortic Interruption
- Aortic Aneurysm
- 286 Ascending
- 287 Descending
- 288 Transverse
- 289 Vascular Ring
- 290 Origin of LPA from RPA (PA sling)
- 291 Discontinuous PAs
- 292 Bronchial PA Blood Flow (MAPCA)
- 293 Isolated LSVC
- 294 Bilateral SVCs
- 295 Azygous/Hemiazygous Continuous IVC
- 296 Other Great Vessel Anomalies

Attachment D

Primary Cardiac Diagnosis Codes (continued)

Coronary Artery Anomalies

- 300 Coronary Artery Fistula
- 301 Coronary Artery Sinusoids
- 302 Coronary Artery Stenosis
- 303 Coronary Artery Aneurysm
- 304 Anomalous Origin Coronary Artery
- 305 Atresia Left Main Coronary Artery
- 306 Atresia Right Main Coronary Artery

Cardiac Rhythm Anomalies

- 310 Supraventricular tachycardia
- 311 Ventricular tachycardia
- 312 Sinus bradycardia
- 313 Heart Block

Cardiomyopathies

- Hypertrophic
- 320 Left Ventricle
- 321 Right Ventricle
- 322 Dilated

- 398 Other Diagnoses NOT Listed

Acquired Disease

- 400 Kawasaki's Disease
- 401 Endocarditis
- 402 Myocarditis
- 403 Traumatic

Organ Failure

- 820 Cardiac
- 821 Pulmonary

Cardiac Neoplasms

- 900 Atrial
- 901 Ventricular
- 902 Valvular
- 903 Great Vessel

Attachment E

Congenital and Acquired Cardiac Procedure Codes NYSDOH CARDIAC ADVISORY COMMITTEE

100-398 Congenital Heart Disease - Operations 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 E (continued)

Congenital and Acquired Cardiac Procedure Codes

Anomalies of Atrioventricular Valves

Tricuspid Valve

- 150 Repair (Non-Ebstein's Valve)
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-ventricular PS
Pulmonary Valve Replacement
- 190 Homograft
- 191 Prosthetic
- 192 Xenograft

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-ventricular AS
- 231 Resection of Discrete Subvalvular AS
- 235 Aortoventriculoplasty (Konno Procedure)
Aortic Valve Replacement
- 240 Autograft (Ross Procedure)

Attachment E (continued)

Congenital and Acquired Cardiac Procedure Codes

Anomalies of Ventricular Outflow Tract(s) (continued)

| | |
|-----|----------------------------|
| 241 | Homograft |
| 242 | Prosthetic |
| 243 | Heterograft |
| | Aortic Root Replacement |
| 250 | Autograft (Ross Procedure) |
| 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 |

Attachment E (continued)

Congenital and Acquired Cardiac Procedure Codes

Univentricular Heart (Single Ventricle) (continued)

| | |
|-----|-----------------------------|
| | Hypoplastic Right Ventricle |
| | Valved |
| 200 | Homograft |
| 201 | Prosthetic |
| 202 | Non-Valved |
| | 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 |

Attachment E (continued)

Congenital and Acquired Cardiac Procedure Codes

Great Vessel Anomalies (continued)

- Aortic Repair (Coarctation or Interruption)
- 340 End to end anastomosis
- 348 End to side 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

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

Attachment E (continued)

Congenital and Acquired Cardiac Procedure Codes

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

Other

- 498 Other Operation for Acquired Heart Disease (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

Attachment E (continued)

Congenital and Acquired Cardiac Procedure Codes

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 | |

Valve Conduits

660 Apical Aortic Conduit

Note: Record Aortic Valve and Ascending Aorta Replacement under Aneurysms.

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

Attachment E (continued)

Congenital and Acquired Cardiac Procedure Codes

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)

Radiofrequency or Operative Ablation

- 770 Atrial
- 771 Ventricular
- 772 Maze Procedure

Attachment E (continued)

Congenital and Acquired Cardiac Procedure Codes

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 E (continued)

Congenital and Acquired Cardiac Procedure Codes

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 (with extracorporeal circulation)