

**Cardiac Surgery Report, Pediatrics
(Under age 18)**

Form DOH-2254p

**Instructions and Data Element Definitions
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Revision Highlights and Coding Clarification

Patient Information

RACE:

In addition to collecting information on White, Black, and Other, this data element has been expanded to include Native American, Asian, and Pacific Islander. If Other is checked you must specify the race.

Procedural Information

DO NOT CODE ISOLATED PATENT DUCTUS ARTERIOSUS:

A pediatric CSRS form is **NOT** required 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 at the bedside.

MODE OF C-P BYPASS:

Circulatory arrest time **SHOULD NOT** be included in the C-P Bypass time. It is a separate data element that should be coded separate from the C-P Bypass time.

VENTRICULAR ASSIST DEVICE CODES:

New procedure codes have been added to accommodate the complete coding for ventricular assist devices. The following are valid codes:

- 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 Extra Corporeal Membrane Oxygenation (*ECMO*)
- 840 Ventricular Assist Device as a Destination Therapy

If you code 840 you must also code 830 or 831.

Revision Highlights and Coding Clarification

Pre-Operative Status

ANY PREVIOUS ORGAN TRANSPLANT:

This risk factor is new to the reporting system in 2003. It should be coded anytime the patient has had any organ transplant **prior** to the cardiac surgery. This includes, but is not limited to, heart, lung, kidney, and liver transplants.

When to Complete a Pediatric CSRS Form

Complete a Pediatric Cardiac Surgery Reporting System (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 operation**. (Example: if a patient's treatment involves 3 separate operating room visits for cardiac surgery, complete 3 pediatric CSRS forms).

Do not include implantations of pacemakers, AICD, or other procedures done in the catheterization lab during the hospital stay.

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.

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 Pediatric Cardiac Surgery Reporting System, but has been included on the form in case your facility finds it useful in identifying and tracking cases.

Patient Information

Child's Name

Enter the child's last name followed by their first name.

Medical Record Number

Enter the child's medical record number.

Child's Social Security Number

Enter the child's social security number as shown in the medical record. If the medical record does not contain the child's social security number or the child does not have one, enter 000-00-0000.

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

Patient Information (Cont.)

Age in Years

Enter the child's age at admission to the hospital. The age should be calculated by subtracting the Date of Birth from the Hospital Admission Date. If the child is less than one year old, enter 0. If the child is admitted on or after their 18th birthday, please complete an Adult CSRS form NOT a Pediatric CSRS form.

Date of Birth

Enter the child's exact date of birth.

Sex

Check the appropriate box.

Ethnicity

Check the appropriate box.

Race

Check the appropriate box. For White Hispanics, check "White"; for Black Hispanics, check "Black". "Other" refers to races other than those listed. If you check "Other" then you MUST specify the patient's race.

Patient Information (Cont.)

Residence Code

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

Enter the date that the current hospital stay began.

Procedural Information

REMINDER: *fill out a separate pediatric cardiac surgery form for each cardiac surgery involving the heart or great vessels during the current hospital admission.*

Date of Surgery

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.

Primary Surgeon Performing Surgery

Enter the name and medical license number of the primary or principle surgeon who performed the cardiac surgical procedure.

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.

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

Emergency: Patients requiring emergency procedures will have cardiac compromise or circulatory compromise of the cardiac organ.

Typical 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.

Procedural Information (Cont.)

Prior Surgery this Admission

Check the appropriate box to indicate whether the patient had any cardiac operations prior to the present cardiac operation during the current hospital admission.

If 'Yes' then the date of the previous cardiac operation **MUST** be entered.

Cardiac Diagnosis Code

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

List up to 5 diagnoses.

If there are more, list the 5 most significant.

Cardiac Procedure Code

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

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

If there are more, 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 D.

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

Procedural Information (Cont.)

Mode of Cardiopulmonary (CP) Bypass

Check all that apply.

If none apply leave blank.

Total Cross Clamp Time

Enter the total cross clamp time in minutes.

Cardiopulmonary (CP) 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 NOT 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 the accuracy of this data element.

Minimally Invasive

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”.

Pre-Operative Status

Pre-op Interventional CATH Procedure (this admission only)

Check the appropriate box. If "Yes" then enter the date the procedure occurred.

If more than one, enter the date of the most recent procedure.

Includes this admission only.

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**.

Weight at Time of Operation

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.

Weight at Birth in grams

If the patient is under one year of age at admission, check the box with the appropriate weight category in grams.

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

Interpretation:

When choosing a category, pick the one that most closely represents the patient's weight at birth.

Pre-Operative Status (Cont.)

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

0. None

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

1-3. Previous Open Heart Operations

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.

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

4-6. Previous Closed Heart Operations

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.

11. Severe Cyanosis or Severe Hypoxia

Code if any of the following are present and documented in the patient's medical record:

Pulse oximetry saturation <70%
Resting PO₂ < 35mmHg
Atrial saturation <75%.

Interpretation:

The following scenario **would** be coded:

Medical record states: the patient's oxygen saturation is 68% baseline on room air.
Central Aorto-Pulmonary Shunt placed for full repair due to cyanosis.

Pre-Operative Status (Cont.)

12. Dialysis within 14 days prior to surgery

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.

Interpretation:

The following scenario **would** be coded:

Intermittent Dialysis ending 7/10
Discharged on 7/12
Admitted on 7/15
Surgery on 7/21

13. Any Ventilator dependence during the same admission or within 14 days prior to surgery

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:

Admitted on 5/15
Ventilator Dependent on 6/1
Extubated on 6/10
Surgery on 6/26
Discharged on 6/30

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

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
Discharge on 6/30

14. Inotropic support immediately pre-op within 24 hrs

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

Dopamine in dosage >5 mcg/kg/minute
Other agents such as Epinephrine or Isoprel in any dosage.

Pre-Operative Status (Cont.)

15. Positive Blood Cultures within 2 weeks of surgery

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.

16. Arterial pH < 7.25, Immediately Pre-op within Hospital Stay

Arterial pH < 7.25 within 12 hours prior to surgery, during the same hospital admission.

17. Significant Renal Dysfunction

Code if Creatinine levels reach the indicated range for the patient's age and/or size:

Preemies	Creatinine ≥ 1 mg /dl
Newborn	Creatinine > 1.5 mg/dl
> 1 month of age	Creatinine ≥ 2 mg/dl

18. Trisomy 21

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

19. Major Extracardiac Anomalies

Examples include but are not limited to:

- Non-Down's Syndrome chromosomal abnormalities
- DiGeorge's Syndrome
- Cystic Fibrosis
- Marfan's Syndrome
- Sickle Cell Anemia
- Blood Dyscrasia
- Omphalocele
- Hypoplastic lung
- Tracheo-esophageal (TE) fistula
- Diaphragmatic hernia

Pre-Operative Status (Cont.)

21. Pulmonary Hypertension

Code when systolic pressure reaches > 50% systemic or when elevated pulmonary vascular resistance exists.

22. Ventricular Assist

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*)

DO NOT Code if procedure codes 830 – 840 or Post Procedural Event 16 are also coded.

24. Pre-existing neurologic abnormality

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

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

25. Pneumonia at time of surgery

As evidenced by:

Chest X-ray with infiltrate

and **ONE** of the following:

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

Pre-Operative Status (Cont.)

26. Prostaglandin dependence at time of surgery

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

27. Balloon Atrial Septostomy

Prior to surgery, but within the same hospital admission, the patient had a Balloon Atrial Septostomy performed in the Cath Lab.

28. Any Previous Organ Transplant

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

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

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

Post Procedural Events Requiring Intervention (Cont.)

1. Cardiac Tamponade

Code if cardiac tamponade is present.

Interpretation:

Cardiac Tamponade is equal to open chest drainage.

Code regardless of where the drainage was performed (operating room, bedside, etc.).

2. Ventricular Fibrillation or CPR

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

3. Bleeding Requiring Reoperation

Return to the operating room for reoperation to control bleeding or to evacuate large hematomas in the thorax or pericardium.

Interpretation:

The evacuation of a hematoma at the bedside **WOULD** be coded, due to the emergency status of the situation in a child.

4. Deep Sternal Wound Infection

Drainage of purulent material from the sternotomy wound.

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.

Post Procedural Events Requiring Intervention (Cont.)

6. Ventilator Dependency > 10 days

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

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 (peritoneal or hemodialysis)

Code if the patient requires either continuous or intermittent, hemodialysis or peritoneal dialysis, post procedure.

DO NOT code if the patient required dialysis within 14 days before the procedure.

12. Complete Heart Block at discharge

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

Post Procedural Events Requiring Intervention (Cont.)

13. Unplanned cardiac reoperation or interventional catheterization

Includes any cardiac reoperation or interventional catheterization.

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

15. New neurologic deficit

New neurologic deficit **present at discharge**.

16. Ventricular Assist

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.

Discharge Information

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.

Discharged Alive To

Check the appropriate box.

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

“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.

Any status 19 that is reported without an indication of where they were discharged to will be sent back during data verification and validation efforts.

Died in

Check the appropriate box.

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

30 Day Status

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 #	HOSPITAL
0001	Albany Medical Center Hospital
0116	Arnot Ogden Medical Center
1438	Bellevue Hospital Center
1439	Beth Israel Medical Center / Petrie Campus
1164	Bronx Lebanon Hospital Center – Fulton Division
1286	Brookdale Hospital Medical Center
0885	Brookhaven Memorial Hospital Medical Center, Inc.
1288	Brooklyn Hospital Center - Downtown
0207	Buffalo General Hospital
0977	Cayuga Medical Center at Ithaca
0135	Champlain Valley Physicians Hospital Medical Center
0208	Children's Hospital of Buffalo
1626	City Hospital Center at Elmhurst
1294	Coney Island Hospital
0636	Crouse Hospital
0829	Ellis Hospital
0210	Erie County Medical Center
0599	Faxton St. Luke's Healthcare, St. Luke's Division
0407	Genesee Hospital (Closed)
1005	Glens Falls Hospital
0925	Good Samaritan Hospital Medical Center (West Islip)
0779	Good Samaritan Hospital of Suffern
1445	Harlem Hospital Center
0913	Huntington Hospital
1300	Interfaith Medical Center, Jewish Hosp. Med Ctr of Brooklyn Division
1629	Jamaica Hospital Medical Center
1450	Lenox Hill Hospital
1302	Long Island College Hospital
1630	Long Island Jewish Medical Center
1304	Lutheran Medical Center
1305	Maimonides Medical Center
0746	Mary Imogene Bassett Hospital
0213	Mercy Hospital of Buffalo
0215	Millard Fillmore Hospital
1169	Montefiore Medical Center – Henry and Lucy Moses Division
3058	Montefiore Medical Center – Jack D. Weiler Hosp. of A. Einstein College Div.

ATTACHMENT A

PFI NUMBERS FOR CARDIAC DIAGNOSTIC AND SURGICAL CENTERS

PFI #	HOSPITAL
1456	Mount Sinai Hospital
0528	Nassau University Medical Center
0541	North Shore University Hospital
1637	NY Hospital Medical Center of Queens
1306	NY Methodist Hospital
1464	NY Presbyterian Hospital Columbia Presbyterian Center
1458	NY Presbyterian Hospital NY Weill Cornell Center
1463	NYU Hospitals Center
0066	Olean General Hospital
0471	Park Ridge Hospital
0411	Rochester General Hospital
0367	Samaritan Medical Center
0818	Saratoga Hospital
1072	Sound Shore Medical Center of Westchester
0527	South Nassau Communities Hospital
0924	Southside Hospital
1176	St. Barnabas Hospital
0943	St. Catherine of Siena Hospital
0598	St. Elizabeth Medical Center
0563	St. Francis Hospital
0870	St. James Mercy Hospital
0630	St. Joseph's Hospital Health Center
1469	St. Luke's Roosevelt Hospital - St. Luke's Hospital Division
1466	St. Luke's Roosevelt Hospital Center, Roosevelt Hospital Division (Closed)
0005	St. Peter's Hospital
1740	Staten Island University Hospital - North
0413	Strong Memorial Hospital
1634	SVCMC – St Johns Queens
1471	SVCMC - St. Vincent's Manhattan
1738	SVCMC - St. Vincent's Staten Island

ATTACHMENT A

PFI NUMBERS FOR CARDIAC DIAGNOSTIC AND SURGICAL CENTERS

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

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

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

ATTACHMENT B

Residence Codes

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

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

ATTACHMENT C

NEW YORK STATE DEPARTMENT OF HEALTH STATE CARDIAC ADVISORY COMMITTEE

PRIMARY CARDIAC DIAGNOSIS CODES

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 Triatrialum

Anomalies of Atrial Septum

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

Anomalies of Atrioventricular Valve(s)

- Tricuspid Valve
- 120 Ebstein's Anomaly
- 121 Tricuspid Stenosis
- 122 Tricuspid Regurgitation
- 123 Straddling Tricuspid Valve

ATTACHMENT C - PRIMARY CARDIAC DIAGNOSIS CODES (CONT.)

Anomalies of Atrioventricular Valve(s) – (Cont.)

	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

Atrioventricular Septal Defects (AVSD)

160	Partial AVSD (Primum ASD)
	Complete AVSD
161	Balanced
162	Unbalanced

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

ATTACHMENT C - PRIMARY CARDIAC DIAGNOSIS CODES (CONT.)

Anomalies of Ventricular Outflow Tracts

200	Pulmonary Ventricular Outflow Tract
201	Pulmonary Valve 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

Truncus Arteriosus

250	Type I
251	Type II
252	Type III

Transposition of the Great Arteries (TGA)

260	D-TGA
261	Congenitally Corrected Transposition

ATTACHMENT C - PRIMARY CARDIAC DIAGNOSIS CODES (CONT.)

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
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

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

ATTACHMENT C - PRIMARY CARDIAC DIAGNOSIS CODES (CONT.)

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 D

NEW YORK STATE DEPARTMENT OF HEALTH STATE CARDIAC ADVISORY COMMITTEE

CONGENITAL AND ACQUIRED CARDIAC PROCEDURE CODES

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

Note: Extracorporeal circulation will be determined from the Cardiopulmonary Bypass Time 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 Triatrialum
- 123 PFO Closure

Atrioventricular Septal Defect (AVSD)

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

Anomalies of Ventricular Septum

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

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

Anomalies of Atrioventricular Valves

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

Anomalies of Ventricular Outflow Tract(s)

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

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

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

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

Tetralogy of Fallot

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

Truncus Arteriosus

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

Univentricular Heart (Single Ventricle)

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

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

Univentricular Heart (Single Ventricle) (Cont.)

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

- 290 Damus Kaye Stansel (*DSK*)

Transposition of Great Arteries or Double Outlet RV

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

Great Vessel Anomalies

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

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

Coronary Artery Anomalies

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

Cardiomyopathies

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

Interval Procedures

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

- 390 Cardiac Arrhythmia Surgery**

- 398 Other Operations for Congenital Heart Disease**

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

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

Repair Of Aortic Deceleration Injury

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

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

Valvuloplasty - Single Valve

500 Aortic
501 Mitral
502 Tricuspid

Replacement - Single Valve

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

Multiple Valve Surgery - Valvuloplasty Or Replacement

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

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

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

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

Valve Conduits

Aortic Valve and Ascending Aorta Replacement: Record Under Aneurysms

660 Apical Aortic Conduit

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

Coronary Artery Bypass Grafts

- 671-676** Saphenous Vein Graft Only
681-686** Single Artery Graft (*Internal Mammary, Radial, Gastroepoic, or Other Arterial graft, with or without a Saphenous Vein Graft*)
691-696** Double Artery Graft (*Internal Mammary, Radial, Gastroepoic, 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 Arterial 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
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
746 Other Single Valve Surgery Plus Single or Multiple CABG
747 Other Multiple Valve Surgery Plus Single or Multiple CABG

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

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

Aortic Aneurysm Repair/Aortic Root Replacement

- 780 Ascending Aorta, With Graft
- 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 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

Transplant Procedures

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

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

Other

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

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