



PDI #6 Pediatric Heart Surgery Mortality

Provider-Level Indicator

Numerator

Number of deaths (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator with a code of pediatric heart surgery with ICD-9-CM diagnosis of congenital heart disease in any field.

Denominator

Discharges under age 18 with ICD-9-CM procedure codes for congenital heart disease (1P) in any field or non-specific heart surgery (2P) in any field with ICD-9-CM diagnosis of congenital heart disease (2D) in any field.

Congenital heart disease procedures (1P)

3500	CLOSED VALVOTOMY NOS	3535	TRABECUL CARNEAE CORD OP
3501	CLOSED AORTIC VALVOTOMY	3539	TISS ADJ TO VALV OPS NEC
3502	CLOSED MITRAL VALVOTOMY	3541	ENLARGE EXISTING SEP DEF
3503	CLOSED PULMON VALVOTOMY	3542	CREATE SEPTAL DEFECT
3504	CLOSED TRICUSP VALVOTOMY	3550	PROSTH REP HRT SEPTA NOS
3510	OPEN VALVULOPLASTY NOS	3551	PROS REP ATRIAL DEF-OPN
3511	OPN AORTIC VALVULOPLASTY	3552	PROS REPAIR ATRIA DEF-CL
3512	OPN MITRAL VALVULOPLASTY	3553	PROST REPAIR VENTRIC DEF
3513	OPN PULMON VALVULOPLASTY	3554	PROS REP ENDOCAR CUSHION
3514	OPN TRICUS VALVULOPLASTY	3560	GRFT REPAIR HRT SEPT NOS
3520	REPLACE HEART VALVE NOS	3561	GRAFT REPAIR ATRIAL DEF
3521	REPLACE AORT VALV-TISSUE	3562	GRAFT REPAIR VENTRIC DEF
3522	REPLACE AORTIC VALVE NEC	3563	GRFT REP ENDOCAR CUSHION
3523	REPLACE MITR VALV-TISSUE	3570	HEART SEPTA REPAIR NOS
3524	REPLACE MITRAL VALVE NEC	3571	ATRIA SEPTA DEF REP NEC
3525	REPLACE PULM VALV-TISSUE	3572	VENTR SEPTA DEF REP NEC
3526	REPLACE PULMON VALVE NEC	3573	ENDOCAR CUSHION REP NEC
3527	REPLACE TRIC VALV-TISSUE	3581	TOT REPAIR TETRAL FALLOT
3528	REPLACE TRICUSP VALV NEC	3582	TOTAL REPAIR OF TAPVC
3531	PAPILLARY MUSCLE OPS	3583	TOT REP TRUNCUS ARTERIOS
3532	CHORDAE TENDINEAE OPS	3584	TOT COR TRANSPOS GRT VES
3533	ANNULOPLASTY	3591	INTERAT VEN RETRN TRANSP
3534	INFUNDIBULECTOMY	3592	CONDUIT RT VENT-PUL ART

3593	CONDUIT LEFT VENTR-AORTA	3736	EXCISION OR DESTRUCTION OF LEFT ATRIAL APPENDAGE (LAA) OCT08-
3594	CONDUIT ARTIUM-PULM ART	375	HEART TRANSPLANTATION (invalid as of OCT03)
3595	HEART REPAIR REVISION	3751	HEART TRANSPLANTATION OCT03-
3598	OTHER HEART SEPTA OPS	3752	IMPLANT TOT REP HRT SYS OCT03-
3599	OTHER OP ON HRT VALVES	390	SYSTEMIC-PULM ART SHUNT
3699	OTHER OPERATIONS ON VESSEL OF HEART	3921	CAVAL-PULMON ART ANASTOM
3733	EXCISION OR DESTRUCTION OF OTHER LESION OR TISSUE OF HEART		

Non-specific cardiac procedures (2P)

3834	RESECTION OF ABDOMINAL AORTA WITH ANASTOMOSIS	3885	OCCLUDE THORACIC VES NEC
3835	THOR VESSEL RESECT/ANAST	3949	OTHER REVISION OF VASCULAR PROCEDURE
3844	RESECTION OF ABDOMINAL AORTA WITH REPLACEMENT	3956	REPAIR OF BLOOD VESSEL WITH TISSUE PATCH GRAFT
3845	RESECT THORAC VES W REPL	3957	REPAIR OF BLOOD VESSEL WITH SYNTHETIC PATCH GRAFT
3864	OTHER EXCISION OF ABDOMINAL AORTA	3958	REPAIR OF BLOOD VESSEL WITH UNSPECIFIED TYPE OF PATCH GRAFT
3865	OTHER EXCISION OF THORACIC VESSEL	3959	REPAIR OF VESSEL NEC
3884	OTHER SURGICAL OCCLUSION OF ABDOMINAL AORTA		

Congenital heart disease diagnoses (2D)

7450	COMMON TRUNCUS	7465	CONGEN MITRAL STENOSIS
74510	COMPL TRANSPOS GREAT VES	7466	CONG MITRAL INSUFFICIENC
74511	DOUBLE OUTLET RT VENTRIC	7467	HYPOPLAS LEFT HEART SYND
74512	CORRECT TRANSPOS GRT VES	74681	CONG SUBAORTIC STENOSIS
74519	TRANSPOS GREAT VESS NEC	74682	COR TRIARIATUM
7452	TETRALOGY OF FALLOT	74683	INFUNDIB PULMON STENOSIS
7453	COMMON VENTRICLE	74684	OBSTRUCT HEART ANOM NEC
7454	VENTRICULAR SEPT DEFECT	74685	CORONARY ARTERY ANOMALY
7455	SECUNDUM ATRIAL SEPT DEF	74687	MALPOSITION OF HEART
74560	ENDOCARD CUSHION DEF NOS	74689	CONG HEART ANOMALY NEC
74561	OSTIUM PRIMUM DEFECT	7469	CONG HEART ANOMALY NOS
74569	ENDOCARD CUSHION DEF NEC	7470	PATENT DUCTUS ARTERIOSUS
7457	COR BILOCULARE	74710	COARCTATION OF AORTA
7458	SEPTAL CLOSURE ANOM NEC	74711	INTERRUPT OF AORTIC ARCH
7459	SEPTAL CLOSURE ANOM NOS	74720	CONG ANOM OF AORTA NOS
74600	PULMONARY VALVE ANOM NOS	74721	ANOMALIES OF AORTIC ARCH
74601	CONG PULMON VALV ATRESIA	74722	AORTIC ATRESIA/STENOSIS
74602	CONG PULMON VALVE STENOS	74729	CONG ANOM OF AORTA NEC
74609	PULMONARY VALVE ANOM NEC	7473	PULMONARY ARTERY ANOM
7461	CONG TRICUSP ATRES/STEN	74740	GREAT VEIN ANOMALY NOS
7462	EBSTEIN'S ANOMALY	74741	TOT ANOM PULM VEN CONN
7463	CONG AORTA VALV STENOSIS	74742	PART ANOM PULM VEN CONN
7464	CONG AORTA VALV INSUFFIC	74749	GREAT VEIN ANOMALY NEC

Exclude cases:

- MDC 14 (pregnancy, childbirth and puerperium)

- with transcatheter interventions (either 3AP, 3BP, 3CP, 3DP, 3EP with 3D, or 3FP) as single cardiac procedures, performed without bypass (5P) but with catheterization (6P)
- with septal defects (4P) as single cardiac procedures without bypass (5P)
- with diagnosis of ASD or VSD (5D) with PDA as the only cardiac procedure
- heart transplant (7P)
- premature infants (4D) with PDA closure (3D and 3EP) as only cardiac procedure;
- age less than or equal to 30 days with PDA closure as only cardiac procedure
- missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1 =missing)
- transferring to another short-term hospital (DISP=2)
- neonates with birth weight less than 500 grams (Birth Weight Category 1)

See *Pediatric Quality Indicators Appendices*:

- Appendix I – Definitions of Neonate, Newborn, Normal Newborn, and Outborn
- Appendix L- Low Birth Weight Categories

Closed heart valvotomy (3AP)

3500	CLOSED HEART VALVOTOMY, UNSPECIFIED VALUE	3503	CLOSED HEART VALVOTOMY, PULMONARY VALUE
3501	CLOSED HEART VALVOTOMY, AORTIC VALUE	3504	CLOSED HEART VALVOTOMY, TRICUSPID VALUE
3502	CLOSED HEART VALVOTOMY, MITRAL VALUE		

Atrial septal enlargement (3BP)

3541	ENLARGEMENT OF EXISTING ATRIAL SEPTAL DEFECT	3542	CREATION OF SEPTAL DEFECT IN HEART
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Atrial septal defect repair (3CP)

3551	REPAIR OF ATRIAL SEPTAL DEFECT WITH PROSTHESIS, OPEN TECHNIQUE	3571	OTHER AND UNSPECIFIED REPAIR OF ATRIAL SEPTAL DEFECT
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Ventricular septal defect repair (3DP)

3553	REPAIR OF VENTRICULAR SEPTAL DEFECT WITH PROSTHESIS	3572	OTHER AND UNSPECIFIED REPAIR OF VENTRICULAR SEPTAL DEFECT
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Occlusion of thoracic vessel (3EP)

3885	OCCLUDE THORACIC VESSEL
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PDA closure diagnosis code (3D)

7470	PATENT DUCTUS ARTERIOSUS
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Other surgical occlusion (3FP)

3884	OTHER SURGICAL OCCLUSION OF AORTA, ABDOMINAL	3959	OTHER REPAIR OF VESSEL
3885	OTHER SURGICAL OCCLUSION OF THORACIC VESSEL		

Atrial septal defect repair and enlargement (4P)

3541 ENLARGE EXISTING SEP DEF

3552 PROS REPAIR ATRIA DEF-CL

Extracorporeal circulation (5P)

3961 EXTRACORPOREAL CIRCULAT

Atrial Septal Defect or Ventricular Septal Defect diagnosis (5D)

7454 VENTRICULAR SEPT DEFECT

7455 SECUNDUM ATRIAL SEPT DEF

Catheterization (6P)

3721 RT HEART CARDIAC CATH

8853 ANGIOCARDIOGRAPHY OF LEFT HEART STRUCTURES

3722 LEFT HEART CARDIAC CATH

8854 COMBINED RIGHT AND LEFT HEART ANGIOCARDIOGRAPHY

3723 RT/LEFT HEART CARD CATH

8855 CORONARY ARTERIOGRAPHY USING A SINGLE CATHETER

8842 CONTRAST AORTOGRAM

8856 CORONARY ARTERIOGRAPHY USING TWO CATHETERS

8843 CONTR PULMON ARTERIOGRAM

8857 OTHER AND UNSPECIFIED CORONARY ARTERIOGRAPHY

8844 ARTERIOGRAPHY OF OTHER

INTRATHORACIC VESSELS

8850 ANGIOCARDIOGRAPHY, NOT OTHERWISE SPECIFIED

8858 NEGATIVE-CONTRAST CARDIAC ROENTGENOGRAPHY

8851 ANGIOCARDIOGRAPHY OF VENAE CAVAE

8852 ANGIOCARDIOGRAPHY OF RIGHT HEART STRUCTURES

Heart Transplant (7P)

375 HEART TRANSPLANTATION (invalid as of OCT03)

3751 HEART TRANSPLANTATION OCT03-
3752 IMPLANT TOT REP HRT SYS OCT03-

Premature infants (4D)

76500 EXTREME IMMATUR WTNOS

76510 PRETERM INFANT NEC WTNOS

76501 EXTREME IMMATUR <500G

76511 PRETERM NEC <500G

76502 EXTREME IMMATUR 500-749G

76512 PRETERM NEC 500-749G

76503 EXTREME IMMATUR 750-999G

76513 PRETERM NEC 750-999G

76504 EXTREME IMMATUR 1000-1249G

76514 PRETERM NEC 1000-1249G

76505 EXTREME IMMATUR 1250-1499G

76515 PRETERM NEC 1250-1499G

76506 EXTREME IMMATUR 1500-1749G

76516 PRETERM NEC 1500-1749G

76507 EXTREME IMMATUR 1750-1999G

76517 PRETERM NEC 1750-1999G

76508 EXTREME IMMATUR 2000-2499G

76518 PRETERM NEC 2000-2499G

76509 EXTREME IMMATUR 2500+G

76519 PRETERM NEC 2500+G