

Pediatric Heart Surgery Mortality Rate

Pediatric Quality Indicators #6 Technical Specifications Provider-Level Indicator

AHRQ Quality Indicators, Version 4.4, March 2012

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) or non-specific heart surgery (2P) with ICD-9-CM diagnosis of congenital heart disease (2D) in any field.

ICD-9-CM Congenital heart disease procedure codes (1P)^{1,2}:

3500	CLOSED VALVOTOMY NOS	3532	CHORDAE TENDINEAE OPS
3501	CLOSED AORTIC VALVOTOMY	3533	ANNULOPLASTY
3502	CLOSED MITRAL VALVOTOMY	3534	INFUNDIBULECTOMY
3503	CLOSED PULMON VALVOTOMY	3535	TRABECUL CARNEAE CORD OP
3504	CLOSED TRICUSP VALVOTOMY	3539	TISS ADJ TO VALV OPS NEC
3505	ENDOVAS REPL AORTC VALVE	3541	ENLARGE EXISTING SEP DEF
3506	TRNSAPCL REP AORTC VALVE	3542	CREATE SEPTAL DEFECT
3507	ENDOVAS REPL PULM VALVE	3550	PROSTH REP HRT SEPTA NOS
3508	TRNSAPCL REPL PULM VALVE	3551	PROS REP ATRIAL DEF-OPN
3510	OPEN VALVULOPLASTY NOS	3552	PROS REPAIR ATRIA DEF-CL
3511	OPN AORTIC VALVULOPLASTY	3553	PROS REP VENTRIC DEF-OPN
3512	OPN MITRAL VALVULOPLASTY	3554	PROS REP ENDOCAR CUSHION
3513	OPN PULMON VALVULOPLASTY	3560	GRFT REPAIR HRT SEPT NOS
3514	OPN TRICUS VALVULOPLASTY	3561	GRAFT REPAIR ATRIAL DEF
3520	OPN/OTH REP HRT VLV NOS	3562	GRAFT REPAIR VENTRIC DEF
3521	OPN/OTH REP AORT VLV-TIS	3563	GRFT REP ENDOCAR CUSHION
3522	OPN/OTH REP AORTIC VALVE	3570	HEART SEPTA REPAIR NOS
3523	OPN/OTH REP MTRL VLV-TIS	3571	ATRIA SEPTA DEF REP NEC
3524	OPN/OTH REP MITRAL VALVE	3572	VENTR SEPTA DEF REP NEC
3525	OPN/OTH REP PULM VLV-TIS	3573	ENDOCAR CUSHION REP NEC
3526	OPN/OTH REPL PUL VALVE	3581	TOT REPAIR TETRAL FALLOT
3527	OPN/OTH REP TCSPD VLV-TS	3582	TOTAL REPAIR OF TAPVC
3528	OPN/OTH REPL TCSPD VALVE	3583	TOT REP TRUNCUS ARTERIOS
3531	PAPILLARY MUSCLE OPS	3584	TOT COR TRANSPOS GRT VES
		3591	INTERAT VEN RETRN TRANSP

**AHRQ QI, Pediatric Quality Indicators #6, Technical Specifications,
Pediatric Heart Surgery Mortality Rate
www.qualityindicators.ahrq.gov**

3592	CONDUIT RT VENT-PUL ART	3733	EXC/DEST HRT LESION OPEN
3593	CONDUIT LEFT VENTR-AORTA	3736	EXC,DESTRCT,EXCLUS LAA
3594	CONDUIT ARTIUM-PULM ART	375	<i>HEART TRANSPLANTATION</i>
3595	HEART REPAIR REVISION	3751	HEART TRANSPLANTATION
3598	OTHER HEART SEPTA OPS	3752	IMP TOT INT BI HT RP SYS
3599	OTHER HEART VALVE OPS	390	SYSTEMIC-PULM ART SHUNT
3699	HEART VESSEL OP NEC	3921	CAVAL-PULMON ART ANASTOM

¹ Italicized codes are not active in the current fiscal year.

² Bolded codes are new to the current fiscal year.

ICD-9-CM Non-specific cardiac procedure codes (2P):

3834	AORTA RESECTION & ANAST	3885	OCCLUDE THORACIC VES NEC
3835	THOR VESSEL RESECT/ANAST	3949	VASC PROC REVISION NEC
3844	RESECT ABDM AORTA W REPL	3956	REPAIR VESS W TIS PATCH
3845	RESECT THORAC VES W REPL	3957	REP VESS W SYNTH PATCH
3864	EXCISION OF AORTA	3958	REPAIR VESS W PATCH NOS
3865	THORACIC VESSEL EXCISION	3959	REPAIR OF VESSEL NEC
3884	OCCLUDE AORTA NEC		

ICD-9-CM Congenital heart disease diagnosis codes (2D)^{1,2}:

7450	COMMON TRUNCUS	7467	HYPOPLAS LEFT HEART SYND
74510	COMPL TRANSPOS GREAT VES	74681	CONG SUBAORTIC STENOSIS
74511	DOUBLE OUTLET RT VENTRIC	74682	COR TRIARIATUM
74512	CORRECT TRANSPOS GRT VES	74683	INFUNDIB PULMON STENOSIS
74519	TRANSPOS GREAT VESS NEC	74684	OBSTRUCT HEART ANOM NEC
7452	TETRALOGY OF FALLOT	74685	CORONARY ARTERY ANOMALY
7453	COMMON VENTRICLE	74687	MALPOSITION OF HEART
7454	VENTRICULAR SEPT DEFECT	74689	CONG HEART ANOMALY NEC
7455	SECUNDUM ATRIAL SEPT DEF	7469	CONG HEART ANOMALY NOS
74560	ENDOCARD CUSHION DEF NOS	7470	PATENT DUCTUS ARTERIOSUS
74561	OSTIUM PRIMUM DEFECT	74710	COARCTATION OF AORTA
74569	ENDOCARD CUSHION DEF NEC	74711	INTERRUPT OF AORTIC ARCH
7457	COR BILOCULARE	74720	CONG ANOM OF AORTA NOS
7458	SEPTAL CLOSURE ANOM NEC	74721	ANOMALIES OF AORTIC ARCH
7459	SEPTAL CLOSURE ANOM NOS	74722	AORTIC ATRESIA/STENOSIS
74600	PULMONARY VALVE ANOM NOS	74729	CONG ANOM OF AORTA NEC
74601	CONG PULMON VALV ATRESIA	7473	<i>PULMONARY ARTERY ANOM</i>
74602	CONG PULMON VALVE STENOS	74731	PULMON ART COARCT/ATRES
74609	PULMONARY VALVE ANOM NEC	74732	PULMONARY AV MALFORMATN
7461	CONG TRICUSP ATRES/STEN	74739	OTH ANOM PUL ARTERY/CIRC
7462	EBSTEIN'S ANOMALY	74740	GREAT VEIN ANOMALY NOS
7463	CONG AORTA VALV STENOSIS	74741	TOT ANOM PULM VEN CONN
7464	CONG AORTA VALV INSUFFIC	74742	PART ANOM PULM VEN CONN
7465	CONGEN MITRAL STENOSIS	74749	GREAT VEIN ANOMALY NEC
7466	CONG MITRAL INSUFFICIENC		

¹ Italicized codes are not active in the current fiscal year.

² Bolded codes are new to the current fiscal year.

Exclude cases:

- MDC 14 (pregnancy, childbirth and puerperium)

- with transcatheter interventions (either 3AP, 3BP, 3CP, 3DP, PDA as the only cardiac procedure*, 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 any diagnosis code of ASD or VSD (5D) with PDA as the only cardiac procedure*
- heart transplant (7P)
- any diagnosis code of premature infant (4D) with PDA as the only cardiac procedure*
- age less than or equal to 30 days with PDA as the only cardiac procedure*
- with missing discharge 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 any diagnosis code of birth weight less than 500 grams (Birth Weight Category 1)

* PDA as the only cardiac procedure is defined as any diagnosis code of (3D) and no other diagnosis code of (2D), and a procedure code of (3EP) and no other procedure code of (1P)

See *Pediatric Quality Indicators Appendices*:

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

ICD-9-CM Closed heart valvotomy procedure codes (3AP):

3500	CLOSED VALVOTOMY NOS	3503	CLOSED PULMON VALVOTOMY
3501	CLOSED AORTIC VALVOTOMY	3504	CLOSED TRICUSP VALVOTOMY
3502	CLOSED MITRAL VALVOTOMY		

ICD-9-CM Atrial septal enlargement procedure codes (3BP):

3541	ENLARGE EXISTING SEP DEF	3542	CREATE SEPTAL DEFECT
------	--------------------------	------	----------------------

ICD-9-CM Atrial septal defect repair procedure codes (3CP):

3551	PROS REP ATRIAL DEF-OPN	3571	ATRIA SEPTA DEF REP NEC
------	-------------------------	------	-------------------------

ICD-9-CM Ventricular septal defect repair procedure codes (3DP):

3553	PROS REP VENTRIC DEF-OPN	3572	VENTR SEPTA DEF REP NEC
------	--------------------------	------	-------------------------

ICD-9-CM Occlusion of thoracic vessel procedure codes (3EP):

3885	OCCLUDE THORACIC VES NEC
------	--------------------------

ICD-9-CM PDA closure diagnosis code (3D):

7470	PATENT DUCTUS ARTERIOSUS
------	--------------------------

ID-9-CM Other surgical occlusion procedure codes (3FP):

3884	OCCLUDE AORTA NEC	3959	REPAIR OF VESSEL NEC
3885	OCCLUDE THORACIC VES NEC		

ICD-9-CM Atrial septal defect repair and enlargement procedure codes (4P):

3541	ENLARGE EXISTING SEP DEF	3552	PROS REPAIR ATRIA DEF-CL
------	--------------------------	------	--------------------------

ICD-9-CM Extracorporeal circulation procedure code (5P):

3961	EXTRACORPOREAL CIRCULAT
------	-------------------------

ICD-9-CM Atrial septal defect or ventricular septal defect diagnosis codes (5D):

7454	VENTRICULAR SEPT DEFECT	7455	SECUNDUM ATRIAL SEPT DEF
------	-------------------------	------	--------------------------

ICD-9-CM Catheterization procedure codes (6P):

3721	RT HEART CARDIAC CATH	3722	LEFT HEART CARDIAC CATH
------	-----------------------	------	-------------------------

**AHRQ QI, Pediatric Quality Indicators #6, Technical Specifications,
 Pediatric Heart Surgery Mortality Rate
 www.qualityindicators.ahrq.gov**

3723	RT/LEFT HEART CARD CATH	8852	RT HEART ANGIOCARDIOGRAM
8842	CONTRAST AORTOGRAM	8853	LT HEART ANGIOCARDIOGRAM
8843	CONTR PULMON ARTERIOGRAM	8854	RT & LT HEART ANGIOCARD
8844	CONTR THOR ARTERIOGR NEC	8855	CORONAR ARTERIOGR-1 CATH
8850	ANGIOCARDIOGRAPHY NOS	8856	CORONAR ARTERIOGR-2 CATH
8851	VENA CAV ANGIOCARDIOGRAM	8857	CORONARY ARTERIOGRAM NEC
		8858	NEGATVE-CONTR CARDIOGRAM

ICD-9-CM Heart transplant procedure codes (7P)¹:

375	<i>HEART TRANSPLANTATION</i>	3752	IMP TOT INT BI HT RP SYS
3751	HEART TRANSPLANTATION		

¹ Italicized codes are not active in the current fiscal year.

ICD-9-CM Premature infants diagnosis codes (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 IMMAT 1000-1249G	76514	PRETERM NEC 1000-1249G
76505	EXTREME IMMAT 1250-1499G	76515	PRETERM NEC 1250-1499G
76506	EXTREME IMMAT 1500-1749G	76516	PRETERM NEC 1500-1749G
76507	EXTREME IMMAT 1750-1999G	76517	PRETERM NEC 1750-1999G
76508	EXTREME IMMAT 2000-2499G	76518	PRETERM NEC 2000-2499G
76509	EXTREME IMMAT 2500+G	76519	PRETERM NEC 2500+G