



STS Congenital Heart Surgery Data Summary  
Children

Duke Clinical Research Institute

STS Period Ending 12/31/2017

Table 1: Children number submitted, in analysis, and operative mortality

	STS	
	Last 1 Year Jan 2017 - Dec 2017	Last Four Years Jan 2014 - Dec 2017
<b>Number of Operations/Patients</b>		
Operations in Analysis <sup>1</sup>	10,692	42,474
Patients in Analysis <sup>2</sup>	9,885	39,421
<b>Operative Mortality<sup>3</sup></b>		
Number of Mortalities	104	399
Number Eligible	9,840	39,295
Mortality Percent	1.1%	1.0%
Mortality (95% CI)	(0.9 , 1.3)	(0.9 , 1.1)

<sup>1</sup>Analysis includes only operations classified as "CPB" or "No CPB, Cardiovascular"

<sup>2</sup>Patient Numbers represent distinct patient admissions

<sup>3</sup>Mortality numbers are patient-based only for admission in the analysis population at sites with adequate mortality data



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**Table 2: Primary diagnosis, 35 Most Frequent for Children, Last 4 Years (Jan 2014 - Dec 2017)**

Primary Diagnosis	STS	
	N	% of All
ASD, Secundum	3,941	9.3%
VSD, Type 2 (Perimembranous) (Paramembranous) (Conoventricular)	2,013	4.7%
Aortic stenosis, Subvalvar	1,872	4.4%
Hypoplastic left heart syndrome (HLHS)	1,661	3.9%
Pulmonary insufficiency	1,638	3.9%
Conduit failure	1,506	3.5%
ASD, Sinus venosus	1,125	2.6%
Cardiac, Other	1,091	2.6%
Cardiomyopathy (including dilated, restrictive, and hypertrophic)	962	2.3%
Coarctation of aorta	960	2.3%
Aortic insufficiency	943	2.2%
Vascular ring	942	2.2%
Mitral regurgitation	919	2.2%
AVC (AVSD), Partial (incomplete) (PAVSD) (ASD, primum)	844	2.0%
Arrhythmia, Pacemaker, Indication for replacement	803	1.9%
Coronary artery anomaly, Anomalous aortic origin of coronary artery (AAOCA)	759	1.8%
Single ventricle, Tricuspid atresia	758	1.8%
Single ventricle, DILV	606	1.4%
Partial anomalous pulmonary venous connection (PAPVC)	559	1.3%
Open sternum with open skin (includes membrane placed to close skin)	558	1.3%
TOF, Pulmonary stenosis	501	1.2%
Arrhythmia, Heart block	494	1.2%
Miscellaneous, Other	472	1.1%
Aortic insufficiency and aortic stenosis	469	1.1%
Single ventricle, Heterotaxia syndrome	464	1.1%
Aortic stenosis, Valvar	462	1.1%
AVC (AVSD), Complete (CAVSD)	458	1.1%
Pulmonary atresia, IVS	419	1.0%
Ebstein's anomaly	395	0.9%
Arrhythmia, Heart block, Acquired	395	0.9%
Pulmonary artery stenosis, Branch, Central (within the hilar bifurcation)	393	0.9%
AVC (AVSD), Intermediate (transitional)	388	0.9%
Pulmonary atresia, VSD-MAPCA	386	0.9%
Pulmonary stenosis, Valvar	380	0.9%
Tricuspid regurgitation, non-Ebstein's related	377	0.9%



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**Table 3: Primary procedure, 35 Most Frequent for Children, Last 4 Years (Jan 2014 - Dec 2017)**

Primary Procedure	STS		
	N	% of All	% Mort.
ASD repair, Patch	3,190	7.5%	0.1%
VSD repair, Patch	1,902	4.5%	0.3%
Fontan, TCPC, External conduit, Fenestrated	1,896	4.5%	1.2%
Pacemaker implantation, Permanent	1,714	4.0%	0.5%
Fontan, TCPC, External conduit, Nonfenestrated	1,364	3.2%	0.7%
PA, reconstruction (plasty), Branch, Central (within the hilar bifurcation)	1,312	3.1%	0.8%
RVOT procedure	1,258	3.0%	0.2%
Transplant, Heart	1,243	2.9%	3.8%
Aortic stenosis, Subvalvar, Repair	1,182	2.8%	0.2%
Valvuloplasty, Mitral	1,154	2.7%	0.9%
Pacemaker procedure	1,138	2.7%	0.3%
Conduit placement, RV to PA	1,132	2.7%	0.6%
Valve replacement, Pulmonic (PVR)	957	2.3%	0.1%
Mediastinal exploration	918	2.2%	0.7%
Delayed sternal closure	892	2.1%	0.7%
Vascular ring repair	872	2.1%	0.1%
ASD repair, Primary closure	792	1.9%	0.0%
Anomalous aortic origin of coronary artery from aorta (AAOCA) repair	754	1.8%	0.4%
Conduit reoperation	748	1.8%	0.3%
Valve replacement, Mitral (MVR)	709	1.7%	3.1%
Valvuloplasty, Tricuspid	626	1.5%	1.4%
Valvuloplasty, Aortic	616	1.5%	0.2%
ASD repair, Patch + PAPVC repair	598	1.4%	0.0%
AVC (AVSD) repair, Partial (Incomplete) (PAVSD)	500	1.2%	0.0%
Fontan, TCPC, Lateral tunnel, Fenestrated	488	1.2%	0.6%
Aortic arch repair	448	1.1%	1.3%
VSD repair, Primary closure	421	1.0%	0.0%
Explantation of pacing system	403	1.0%	0.2%
Coarctation repair, End to end, Extended	402	0.9%	0.5%
PA, reconstruction (plasty), Main (trunk)	396	0.9%	0.8%
PAPVC repair	386	0.9%	0.0%
Ross procedure	358	0.8%	0.3%
Pericardial drainage procedure	356	0.8%	1.1%
Aortic stenosis, Subvalvar, Repair, With myectomy for IHSS	347	0.8%	0.9%
Aortic stenosis, Supravalvar, Repair	321	0.8%	0.6%