



**STS Congenital Heart Surgery Data Summary
Children**

 **Duke Clinical Research Institute**

STS Period Ending 12/31/2016

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

	STS	
	Last 1 Year Jan 2016 - Dec 2016	Last Four Years Jan 2013 - Dec 2016
Number of Operations/Patients		
Operations in Analysis ¹	10,326	41,993
Patients in Analysis ²	9,536	38,875
Operative Mortality³		
Number of Mortalities	92	398
Number Eligible	9,477	38,660
Mortality Percent	1.0%	1.0%
Mortality (95% CI)	(0.8 , 1.2)	(0.9 , 1.1)

¹Analysis includes only operations classified as "CPB" or "No CPB, Cardiovascular"

²Patient Numbers represent distinct patient admissions

³Mortality 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 2013 - Dec 2016)

Primary Diagnosis	STS	
	N	% of All
ASD, Secundum	3,908	9.3%
VSD, Type 2 (Perimembranous) (Paramembranous) (Conoventricular)	1,963	4.7%
Aortic stenosis, Subvalvar	1,808	4.3%
Hypoplastic left heart syndrome (HLHS)	1,727	4.1%
Pulmonary insufficiency	1,648	3.9%
Conduit failure	1,507	3.6%
Cardiac, Other	1,221	2.9%
ASD, Sinus venosus	1,096	2.6%
Cardiomyopathy (including dilated, restrictive, and hypertrophic)	984	2.3%
Coarctation of aorta	970	2.3%
Aortic insufficiency	956	2.3%
Mitral regurgitation	917	2.2%
Vascular ring	906	2.2%
AVC (AVSD), Partial (incomplete) (PAVSD) (ASD, primum)	823	2.0%
Arrhythmia, Pacemaker, Indication for replacement	816	1.9%
Single ventricle, Tricuspid atresia	783	1.9%
Coronary artery anomaly, Anomalous aortic origin of coronary artery (AAOCA)	735	1.8%
Single ventricle, DILV	587	1.4%
Miscellaneous, Other	543	1.3%
Partial anomalous pulmonary venous connection (PAPVC)	520	1.2%
TOF, Pulmonary stenosis	502	1.2%
Aortic stenosis, Valvar	472	1.1%
Arrhythmia, Heart block	471	1.1%
AVC (AVSD), Complete (CAVSD)	470	1.1%
Aortic insufficiency and aortic stenosis	463	1.1%
Single ventricle, Heterotaxia syndrome	431	1.0%
Pulmonary atresia, IVS	408	1.0%
Pulmonary atresia, VSD (Including TOF, PA)	400	1.0%
Open sternum with open skin (includes membrane placed to close skin)	399	1.0%
Pulmonary stenosis, Valvar	395	0.9%
Ebstein's anomaly	388	0.9%
Pulmonary atresia, VSD-MAPCA	387	0.9%
Arrhythmia, Heart block, Acquired	383	0.9%
TOF	365	0.9%
AVC (AVSD), Intermediate (transitional)	363	0.9%



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Table 3: Primary procedure, 35 Most Frequent for Children, Last 4 Years (Jan 2013 - Dec 2016)

Primary Procedure	STS		
	N	% of All	% Mort.
ASD repair, Patch	3,178	7.6%	0.1%
Fontan, TCPC, External conduit, Fenestrated	1,954	4.7%	1.2%
VSD repair, Patch	1,811	4.3%	0.3%
Pacemaker implantation, Permanent	1,588	3.8%	0.5%
Fontan, TCPC, External conduit, Nonfenestrated	1,390	3.3%	1.1%
Pacemaker procedure	1,263	3.0%	0.2%
RVOT procedure	1,247	3.0%	0.2%
Transplant, Heart	1,200	2.9%	3.8%
PA, reconstruction (plasty), Branch, Central (within the hilar bifurcation)	1,172	2.8%	0.7%
Valvuloplasty, Mitral	1,165	2.8%	0.6%
Conduit placement, RV to PA	1,120	2.7%	0.5%
Aortic stenosis, Subvalvar, Repair	1,109	2.7%	0.2%
Valve replacement, Pulmonic (PVR)	987	2.4%	0.1%
Mediastinal exploration	930	2.2%	0.4%
Delayed sternal closure	846	2.0%	0.9%
Vascular ring repair	824	2.0%	0.1%
ASD repair, Primary closure	816	2.0%	0.1%
Conduit reoperation	753	1.8%	0.3%
Anomalous aortic origin of coronary artery from aorta (AAOCA) repair	713	1.7%	0.4%
Valve replacement, Mitral (MVR)	675	1.6%	3.1%
Valvuloplasty, Aortic	635	1.5%	0.3%
Valvuloplasty, Tricuspid	615	1.5%	1.5%
ASD repair, Patch + PAPVC repair	592	1.4%	0.0%
Fontan, TCPC, Lateral tunnel, Fenestrated	577	1.4%	0.5%
AVC (AVSD) repair, Partial (Incomplete) (PAVSD)	472	1.1%	0.2%
VSD repair, Primary closure	423	1.0%	0.2%
Explantation of pacing system	406	1.0%	0.2%
Aortic arch repair	399	1.0%	0.8%
Coarctation repair, End to end, Extended	397	1.0%	0.5%
PA, reconstruction (plasty), Main (trunk)	384	0.9%	0.8%
Ross procedure	359	0.9%	0.3%
PAPVC repair	357	0.9%	0.0%
Pericardial drainage procedure	346	0.8%	0.6%
Aortic stenosis, Supravalvar, Repair	329	0.8%	0.6%
Aortic stenosis, Subvalvar, Repair, With myectomy for IHSS	317	0.8%	0.6%