



**STS Congenital Heart Surgery Data Summary
All Patients**

Duke Clinical Research Institute

STS Period Ending 06/30/2018

Table 1: All Patients number submitted, in analysis, and operative mortality

	STS	
	Last 1 Year Jul 2017 - Jun 2018	Last Four Years Jul 2014 - Jun 2018
Number of Operations/Patients		
Operations Submitted	38,246	157,394
Operations in Analysis ¹	29,486	122,459
Patients in Analysis ²	24,400	101,757
Operative Mortality³		
Number of Mortalities	578	2,687
Number Eligible	22,233	92,588
Mortality Percent	2.6	2.9
Mortality (95% CI)	(2.4 , 2.8)	(2.8 , 3.0)

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 All Patients, Last 4 Years (Jul 2014 - Jun 2018)

Primary Diagnosis	STS	
	N	% of All
VSD, Type 2 (Perimembranous) (Paramembranous) (Conoventricular)	7,658	6.3%
Open sternum with open skin (includes membrane placed to close skin)	7,185	5.9%
Hypoplastic left heart syndrome (HLHS)	7,160	5.8%
Patent ductus arteriosus	5,180	4.2%
ASD, Secundum	4,893	4.0%
TOF, Pulmonary stenosis	4,735	3.9%
Coarctation of aorta	4,328	3.5%
AVC (AVSD), Complete (CAVSD)	4,127	3.4%
Pulmonary insufficiency	2,895	2.4%
Cardiac, Other	2,633	2.2%
Aortic stenosis, Subvalvar	2,370	1.9%
Single ventricle, Tricuspid atresia	2,119	1.7%
TGA, IVS	2,012	1.6%
Vascular ring	1,928	1.6%
Conduit failure	1,887	1.5%
Miscellaneous, Other	1,824	1.5%
Pulmonary atresia, VSD (Including TOF, PA)	1,729	1.4%
Mitral regurgitation	1,551	1.3%
Single ventricle, DILV	1,545	1.3%
Aortic insufficiency	1,490	1.2%
Pulmonary atresia, IVS	1,423	1.2%
ASD, Sinus venosus	1,417	1.2%
Aortic arch hypoplasia	1,349	1.1%
TGA, VSD	1,342	1.1%
Cardiomyopathy (including dilated, restrictive, and hypertrophic)	1,313	1.1%
Arrhythmia, Pacemaker, Indication for replacement	1,245	1.0%
AVC (AVSD), Partial (incomplete) (PAVSD) (ASD, primum)	1,228	1.0%
Single ventricle, Heterotaxia syndrome	1,168	1.0%
TOF	1,163	0.9%
Aortic stenosis, Valvar	1,147	0.9%
DORV, TGA type	1,062	0.9%
Pulmonary atresia, VSD-MAPCA	992	0.8%
Coronary artery anomaly, Anomalous aortic origin of coronary artery (AAOCA)	968	0.8%
Truncus arteriosus	945	0.8%
Ebstein's anomaly	945	0.8%



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Table 3: Primary procedure, 35 Most Frequent for All Patients, Last 4 Years (Jul 2014 - Jun 2018)

Primary Procedure	STS		
	N	% of All	% Mort.
Delayed sternal closure	9,343	8.3%	0.2%
VSD repair, Patch	7,091	6.3%	0.6%
Mediastinal exploration	3,958	3.5%	0.5%
ASD repair, Patch	3,637	3.2%	0.2%
AVC (AVSD) repair, Complete (CAVSD)	3,107	2.8%	2.5%
Norwood procedure	2,816	2.5%	13.7%
Pacemaker implantation, Permanent	2,602	2.3%	0.9%
Bidirectional cavopulmonary anastomosis (BDCPA) (bidirectional Glenn)	2,546	2.3%	1.8%
PA banding (PAB)	2,454	2.2%	7.0%
Coarctation repair, End to end, Extended	2,423	2.2%	1.3%
RVOT procedure	2,355	2.1%	1.1%
TOF repair, Ventriculotomy, Transanular patch	2,300	2.1%	1.7%
Aortic arch repair	2,222	2.0%	2.9%
PA, reconstruction (plasty), Branch, Central (within the hilar bifurcation)	2,132	1.9%	1.3%
Shunt, Systemic to pulmonary, Modified Blalock-Taussig Shunt (MBTS)	1,973	1.8%	6.8%
Fontan, TCPC, External conduit, Fenestrated	1,853	1.7%	1.2%
Transplant, Heart	1,834	1.6%	3.9%
Arterial switch operation (ASO)	1,813	1.6%	2.1%
Valvuloplasty, Mitral	1,754	1.6%	1.3%
Pacemaker procedure	1,729	1.5%	0.3%
Valve replacement, Pulmonic (PVR)	1,641	1.5%	0.2%
Vascular ring repair	1,619	1.4%	0.2%
Conduit placement, RV to PA	1,601	1.4%	1.6%
TAPVC repair	1,504	1.3%	6.2%
Aortic stenosis, Subvalvar, Repair	1,325	1.2%	0.2%
Fontan, TCPC, External conduit, Nonfenestrated	1,284	1.1%	0.5%
Valvuloplasty, Tricuspid	1,255	1.1%	1.5%
Superior Cavopulmonary anastomosis(es) + PA reconstruction	1,254	1.1%	1.9%
TOF repair, Ventriculotomy, Nontransanular patch	1,243	1.1%	1.0%
PDA closure, Surgical	1,216	1.1%	4.2%
Valve replacement, Mitral (MVR)	1,163	1.0%	3.0%
TOF repair, No ventriculotomy	1,052	0.9%	0.4%
Shunt, Systemic to pulmonary, Central (shunt from aorta)	986	0.9%	7.7%
Conduit reoperation	896	0.8%	0.3%
Aortic arch repair + VSD repair	889	0.8%	2.6%