



**STS Congenital Heart Surgery Data Summary  
Neonates**

**STS Period Ending 06/30/2017**

**Table 1: Neonates number submitted, in analysis, and operative mortality**

	STS	
	Last 1 Year Jul 2016 - Jun 2017	Last Four Years Jul 2013 - Jun 2017
<b>Number of Operations/Patients</b>		
Operations in Analysis <sup>1</sup>	6,929	29,679
Patients in Analysis <sup>2</sup>	4,714	20,572
<b>Operative Mortality<sup>3</sup></b>		
Number of Mortalities	302	1,401
Number Eligible	3,871	16,567
Mortality Percent	7.8%	8.5%
Mortality (95% CI)	(7.0 , 8.7)	(8.0 , 8.9)

<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 Neonates, Last 4 Years (Jul 2013 - Jul 2017)**

Primary Diagnosis	N	STS	
			% of All
Open sternum with open skin (includes membrane placed to close skin)	3,490		11.8%
Hypoplastic left heart syndrome (HLHS)	3,284		11.1%
Patent ductus arteriosus	2,809		9.5%
Coarctation of aorta	2,171		7.3%
TGA, IVS	1,915		6.5%
TGA, VSD	1,047		3.5%
Cardiac, Other	918		3.1%
Aortic arch hypoplasia	779		2.6%
Pulmonary atresia, VSD (Including TOF, PA)	730		2.5%
Truncus arteriosus	669		2.3%
Miscellaneous, Other	656		2.2%
VSD + Coarctation of aorta	649		2.2%
Total anomalous pulmonary venous connection (TAPVC), Type 1 (supracardiac)	576		1.9%
Pulmonary atresia, IVS	520		1.8%
VSD + Aortic arch hypoplasia	519		1.7%
Single ventricle, Tricuspid atresia	467		1.6%
Total anomalous pulmonary venous connection (TAPVC), Type 3 (infracardiac)	458		1.5%
DORV, TGA type	450		1.5%
TOF, Pulmonary stenosis	406		1.4%
Interrupted aortic arch + VSD	394		1.3%
Single ventricle, DILV	388		1.3%
Open sternum with closed skin	343		1.2%
Single ventricle, Heterotaxia syndrome	311		1.0%
Interrupted aortic arch	310		1.0%
AVC (AVSD), Complete (CAVSD)	263		0.9%
Postoperative bleeding	248		0.8%
Single ventricle, Unbalanced AV canal	247		0.8%
Single ventricle, Mitral atresia	211		0.7%
Arrhythmia, Heart block, Congenital	188		0.6%
Total anomalous pulmonary venous connection (TAPVC), Type 2 (cardiac)	182		0.6%
Aortic stenosis, Valvar	178		0.6%
Pericardial effusion	167		0.6%
Ebstein's anomaly	160		0.5%
Pulmonary atresia, VSD-MAPCA	156		0.5%
VSD, Type 2 (Perimembranous) (Paramembranous) (Conoventricular)	139		0.5%



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**Table 3: Primary procedure, 35 Most Frequent for Neonates, Last 4 Years (Jul 2013 - Jul 2017)**

Primary Procedure	STS		
	N	% of All	% Mort.
Delayed sternal closure	5,257	21.2%	0.1%
Norwood procedure	2,580	10.4%	14.8%
Arterial switch operation (ASO)	1,698	6.9%	1.8%
Shunt, Systemic to pulmonary, Modified Blalock-Taussig Shunt (MBTS)	1,553	6.3%	6.4%
Mediastinal exploration	1,503	6.1%	0.5%
Coarctation repair, End to end, Extended	1,373	5.5%	1.5%
PA banding (PAB)	1,270	5.1%	9.4%
TAPVC repair	1,105	4.5%	7.5%
Aortic arch repair	1,014	4.1%	3.3%
Arterial switch operation (ASO) and VSD repair	632	2.6%	4.9%
Aortic arch repair + VSD repair	627	2.5%	2.4%
Shunt, Systemic to pulmonary, Central (shunt from aorta)	585	2.4%	8.0%
Truncus arteriosus repair	488	2.0%	10.2%
Interrupted aortic arch repair	438	1.8%	3.4%
Hybrid Approach Stage 1, Stent placement in arterial duct (PDA) + application of RPA & LPA bands	299	1.2%	18.7%
Coarctation repair, End to end	291	1.2%	2.4%
Arterial switch procedure and VSD repair + Aortic arch repair	271	1.1%	15.5%
PDA closure, Surgical	213	0.9%	5.2%
TOF repair, Ventriculotomy, Transanular patch	196	0.8%	2.0%
Hybrid Approach Stage 1, Application of RPA & LPA bands	187	0.8%	41.2%
Sternotomy wound drainage	139	0.6%	0.0%
VSD repair, Patch	110	0.4%	0.9%
Vascular ring repair	98	0.4%	1.0%
Shunt, Reoperation	97	0.4%	0.0%
PA, reconstruction (plasty), Branch, Central (within the hilar bifurcation)	96	0.4%	3.1%
Coarctation repair + VSD repair	96	0.4%	3.1%
Conduit placement, RV to PA	95	0.4%	9.5%
Mediastinal procedure	95	0.4%	2.1%
RVOT procedure	90	0.4%	12.2%
Pericardial drainage procedure	90	0.4%	4.4%
Pulmonary atresia - VSD (including TOF, PA) repair	88	0.4%	4.5%
TAPVC repair + Shunt - systemic-to-pulmonary	87	0.4%	44.8%
Coarctation repair, Patch aortoplasty	80	0.3%	2.5%
Damus-Kaye-Stansel procedure (DKS) (creation of AP anastomosis without arch reconstruction)	80	0.3%	21.3%
Coarctation repair, Subclavian flap	80	0.3%	1.3%