



STS Congenital Heart Surgery Data Summary Children



STS Period Ending 12/31/2018

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

| | STS | |
|--|------------------------------------|--|
| | Last 1 Year Jan 2018 - Dec 2018 | Last Four Years Jan 2015 - Dec 2018 |
| Number of Operations/Patients | | |
| Operations in Analysis ¹ | 10,773 | 42,814 |
| Patients in Analysis ² | 9,930 | 39,656 |
| Operative Mortality³ | | |
| Number of Mortalities | 100 | 397 |
| Number Eligible | 9,812 | 39,157 |
| 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 2015 - Dec 2018)

| Primary Diagnosis | STS | |
|---|-------|----------|
| | N | % of All |
| ASD, Secundum | 3,987 | 9.3% |
| VSD, Type 2 (Perimembranous) (Paramembranous) (Conoventricular) | 2,061 | 4.8% |
| Aortic stenosis, Subvalvar | 1,891 | 4.4% |
| Hypoplastic left heart syndrome (HLHS) | 1,655 | 3.9% |
| Pulmonary insufficiency | 1,581 | 3.7% |
| Conduit failure | 1,534 | 3.6% |
| ASD, Sinus venosus | 1,118 | 2.6% |
| Cardiac, Other | 1,090 | 2.5% |
| Vascular ring | 1,001 | 2.3% |
| Coarctation of aorta | 967 | 2.3% |
| Cardiomyopathy (including dilated, restrictive, and hypertrophic) | 951 | 2.2% |
| Mitral regurgitation | 921 | 2.2% |
| Aortic insufficiency | 889 | 2.1% |
| AVC (AVSD), Partial (incomplete) (PAVSD) (ASD, primum) | 863 | 2.0% |
| Arrhythmia, Pacemaker, Indication for replacement | 766 | 1.8% |
| Single ventricle, Tricuspid atresia | 756 | 1.8% |
| Coronary artery anomaly, Anomalous aortic origin of coronary artery (AAOCA) | 741 | 1.7% |
| Open sternum with open skin (includes membrane placed to close skin) | 624 | 1.5% |
| Partial anomalous pulmonary venous connection (PAPVC) | 618 | 1.4% |
| Single ventricle, DILV | 596 | 1.4% |
| TOF, Pulmonary stenosis | 518 | 1.2% |
| Arrhythmia, Heart block | 504 | 1.2% |
| Aortic insufficiency and aortic stenosis | 492 | 1.1% |
| Miscellaneous, Other | 492 | 1.1% |
| Aortic stenosis, Valvar | 464 | 1.1% |
| Single ventricle, Heterotaxia syndrome | 458 | 1.1% |
| AVC (AVSD), Complete (CAVSD) | 423 | 1.0% |
| Tricuspid regurgitation, non-Ebstein's related | 406 | 0.9% |
| Pulmonary artery stenosis, Branch, Central (within the hilar bifurcation) | 406 | 0.9% |
| Ebstein's anomaly | 390 | 0.9% |
| Pulmonary atresia, IVS | 389 | 0.9% |
| AVC (AVSD), Intermediate (transitional) | 386 | 0.9% |
| Arrhythmia, Heart block, Acquired | 381 | 0.9% |
| Pulmonary atresia, VSD-MAPCA | 378 | 0.9% |
| Pulmonary stenosis, Valvar | 376 | 0.9% |



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Table 3: Primary procedure, 35 Most Frequent for Children, Last 4 Years (Jan 2015 - Dec 2018)

| Primary Procedure | STS | | |
|--|-------|----------|---------|
| | N | % of All | % Mort. |
| ASD repair, Patch | 3,217 | 7.6% | 0.1% |
| VSD repair, Patch | 1,913 | 4.5% | 0.2% |
| Fontan, TCPC, External conduit, Fenestrated | 1,850 | 4.4% | 1.3% |
| Pacemaker implantation, Permanent | 1,714 | 4.1% | 0.7% |
| PA, reconstruction (plasty), Branch, Central (within the hilar bifurcation) | 1,381 | 3.3% | 0.4% |
| Fontan, TCPC, External conduit, Nonfenestrated | 1,360 | 3.2% | 0.4% |
| Transplant, Heart | 1,285 | 3.0% | 4.0% |
| RVOT procedure | 1,242 | 2.9% | 0.2% |
| Aortic stenosis, Subvalvar, Repair | 1,196 | 2.8% | 0.2% |
| Valvuloplasty, Mitral | 1,169 | 2.8% | 0.7% |
| Pacemaker procedure | 1,088 | 2.6% | 0.4% |
| Conduit placement, RV to PA | 1,041 | 2.5% | 0.7% |
| Delayed sternal closure | 946 | 2.2% | 0.8% |
| Vascular ring repair | 909 | 2.2% | 0.1% |
| Valve replacement, Pulmonic (PVR) | 892 | 2.1% | 0.2% |
| Mediastinal exploration | 890 | 2.1% | 0.9% |
| Conduit reoperation | 791 | 1.9% | 0.4% |
| ASD repair, Primary closure | 762 | 1.8% | 0.0% |
| Anomalous aortic origin of coronary artery from aorta (AAOCA) repair | 721 | 1.7% | 0.3% |
| Valve replacement, Mitral (MVR) | 703 | 1.7% | 2.7% |
| Valvuloplasty, Tricuspid | 655 | 1.6% | 1.2% |
| Valvuloplasty, Aortic | 606 | 1.4% | 0.3% |
| ASD repair, Patch + PAPVC repair | 587 | 1.4% | 0.0% |
| AVC (AVSD) repair, Partial (Incomplete) (PAVSD) | 506 | 1.2% | 0.0% |
| Aortic arch repair | 475 | 1.1% | 1.5% |
| Fontan, TCPC, Lateral tunnel, Fenestrated | 438 | 1.0% | 0.7% |
| VSD repair, Primary closure | 433 | 1.0% | 0.0% |
| Coarctation repair, End to end, Extended | 423 | 1.0% | 0.2% |
| PAPVC repair | 400 | 0.9% | 0.3% |
| Explantation of pacing system | 399 | 0.9% | 0.3% |
| PA, reconstruction (plasty), Main (trunk) | 381 | 0.9% | 0.8% |
| Pericardial drainage procedure | 378 | 0.9% | 2.1% |
| Aortic stenosis, Subvalvar, Repair, With myectomy for IHSS | 356 | 0.8% | 0.6% |
| PAPVC repair, Baffle redirection to left atrium with systemic vein translocation (Warden) (SVC sewn to right atrial appendage) | 353 | 0.8% | 0.0% |
| Ross procedure | 346 | 0.8% | 0.6% |