

**Appendix C: The Society of Thoracic Surgeons - European Association for Cardio-Thoracic Surgery Congenital Heart Surgery Mortality Categories (STAT Mortality Categories) (May 5, 2022)**

Procedure Harvest codes highlighted in orange are procedures that currently exist in the CHSD and will be analyzed with their new STAT Score beginning with the Spring 2022 data analysis.

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Procedure Harvest Code	Procedure Name	STAT Mortality Score	New STAT Mortality Score	STAT Mortality Category	New STAT Mortality Category
780	Aortic stenosis, Subvalvar, Repair	0.2	0.1	1	1
600	Valve replacement, Pulmonic (PVR)	0.3	0.1	1	1
**2110	ASD Repair, Patch + PAPCV Repair	0.2	0.1	1	1
30	ASD repair, Patch	0.1	0.1	1	1
180	AVC (AVSD) repair, Intermediate (Transitional)	0.3	0.1	1	1
20	ASD repair, Primary closure	0.2	0.1	1	1
580	Conduit reoperation	0.3	0.1	1	1
*2120	PAPVC Repair, Baffle redirection to left atrium with systemic vein translocation (Warden) (SVC sewn to right atrial appendage)	0.3	0.1	1	1
*1305	Anomalous aortic origin of coronary artery from aorta (AAOCA) repair	0.6	0.1	2	1
570	DCRV repair	0.2	0.1	1	1
3650	Division with or without reimplantation of aberrant subclavian artery		0.1		1
1360	Vascular ring repair	0.2	0.1	1	1
360	TOF repair, Ventriculotomy, Nontransanular patch	0.3	0.1	1	1
970	Fontan, TCPC, Lateral tunnel, Fenestrated	0.3	0.1	1	1
10	PFO, Primary closure	0.2	0.1	1	1
110	VSD repair, Patch	0.2	0.1	1	1
260	PAPVC repair	0.3	0.1	1	1
350	TOF repair, No ventriculotomy	0.3	0.1	1	1

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1365	Aortopexy	0.4	0.1	2	1
3780	Anterior PA translocation (not performed as part of an arterial switch operation) (Le Compte)		0.1		1
590	Valvuloplasty, Pulmonic	0.5	0.1	2	1
740	Ross procedure	0.4	0.1	2	1
190	AVC (AVSD) repair, Partial (Incomplete) (PAVSD)	0.1	0.1	1	1
1460	Pacemaker procedure	0.3	0.1	1	1
100	VSD repair, Primary closure	0.3	0.1	1	1
980	Fontan, TCPC, Lateral tunnel, Nonfenestrated	0.7	0.1	2	1
1470	ICD (AICD) implantation	0.2	0.2	1	1
1480	ICD (AICD) ([automatic] implantable cardioverter defibrillator) procedure	0.2	0.2	1	1
715	Aortic root replacement, Bioprosthetic	0.5	0.2	2	1
510	RVOT procedure	0.5	0.2	2	1
1220	Coarctation repair, End to end, Extended	0.5	0.2	2	1
690	Valve replacement, Aortic/Neo-Aortic (AVR), Bioprosthetic	0.3	0.2	1	1
460	Valvuloplasty, Tricuspid	0.7	0.2	2	1
*2100	Aortic stenosis, Subvalvar, Repair, With myectomy for IHSS	0.6	0.2	2	1
660	Valvuloplasty, Aortic/Neo-Aortic	0.4	0.2	2	1
3540	Valvuloplasty, Aortic/Neo-Aortic Valve, Reduction of number of cusps/sinus resection		0.2		1

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3550	Valvuloplasty, Aortic/Neo-Aortic Valve, Augmentation of valve leaflet (one or more)		0.2		1
3560	Valvuloplasty, Aortic/Neo-Aortic Valve, Neo-cuspidization (including one or more leaflet - 'Ozaki' type repair etc.)		0.2		1
1370	Pulmonary artery sling repair	1.1	0.2	3	1
810	Sinus of Valsalva, Aneurysm repair	0.3	0.2	1	1
530	PA, Reconstruction (Plasty), Main (Trunk)	0.4	0.2	2	1
240	Valvuloplasty, Truncal valve	0.8	0.2	3	1
3490	Valvuloplasty, Truncal valve, Reduction of number of cusps/sinus resection		0.2		1
3500	Valvuloplasty, Truncal valve, Augmentation of valve leaflet (one of more)		0.2		1
3510	Valvuloplasty, Truncal valve, Neo-cuspidization (including one or more leaflet - 'Ozaki' type repair etc.)		0.2		1
1150	Rastelli	0.9	0.2	3	1
*2350	Explantation of pacing system	0.5	0.2	2	1
1210	Coarctation repair, End to end	0.2	0.2	1	1
1380	Aortic aneurysm repair	0.5	0.2	2	1
1700	Hemifontan ( <b>HemiFontan</b> )	0.8	0.2	3	1
5001	(110+20) VSD repair, Patch + ASD repair, Primary closure		0.2		1
735	Aortic root replacement, Valve sparing	0.6	0.2	2	1
1240	Coarctation repair, Patch aortoplasty	0.8	0.2	3	1

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680	Valve replacement, Aortic/Neo-Aortic (AVR), Mechanical	0.3	0.2	1	1
520	1 1/2 ventricular repair	0.4	0.2	2	1
1250	Coarctation repair, Interposition graft	0.3	0.2	1	1
1490	Arrhythmia surgery - atrial, Surgical Ablation	0.7	0.2	2	1
1010	Fontan, TCPC, External conduit, Nonfenestrated	0.6	0.2	2	1
370	TOF repair, Ventriculotomy, Transanular patch	0.5	0.2	2	1
*****3330	TOF repair, Ventriculotomy, Transanular patch, plus native valve reconstruction	0.5	0.2	2	1
*****3340	TOF repair, Ventriculotomy, Transanular patch, with monocusp or other surgically fashioned RVOT valve	0.5	0.2	2	1
1720	Aneurysm, Ventricular, Right, Repair	0.8	0.2	3	1
1450	Pacemaker implantation, Permanent	0.4	0.2	2	1
*2340	Fontan + Atrioventricular valvuloplasty	1.2	0.2	3	1
220	Pulmonary artery origin from ascending aorta (Hemitruncus) repair	0.6	0.2	2	1
1000	Fontan, TCPC, External conduit, Fenestrated	0.6	0.2	2	1
****3160	Kawashima operation (superior cavopulmonary connection in setting of interrupted IVC with azygous continuation)	0.6	0.2	2	1
290	Cor triatriatum repair	0.7	0.2	2	1
210	AP window repair	0.5	0.2	2	1
****2780	Fontan, TCPC, Intra/extracardiac conduit, Fenestrated	0.6	0.2	2	1
830	Valvuloplasty, Mitral or Systemic Atrioventricular Valve	0.4	0.3	2	2

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*2240	Valvuloplasty converted to valve replacement in the same operation, Aortic/Neo-Aortic	0.7	0.3	2	2
85	Atrial fenestration closure	0.7	0.3	2	2
1500	Arrhythmia surgery - ventricular, Surgical Ablation	0.4	0.3	2	2
770	Other annular enlargement procedure		0.3		2
540	PA, reconstruction (plasty), Branch, Central (within the hilar bifurcation)	0.8	0.3	3	2
640	Valve closure, semilunar		0.3		2
1680	Glenn (Unidirectional cavopulmonary anastomosis) (Unidirectional Glenn)	0.3	0.3	1	2
1670	Bidirectional cavopulmonary anastomosis (BDCPA) (Bidirectional Glenn)	0.5	0.3	2	2
****3200	PA band adjustment	1.5	0.3	4	2
**1123	Arterial switch procedure + Aortic arch repair	1.4	0.3	4	2
1630	Shunt, Ligation and takedown	0.8	0.3	3	2
5004	(350+20) TOF repair, No Ventriculotomy + ASD repair, Primary closure		0.3		2
840	Mitral stenosis, Supraaortic mitral ring repair	0.6	0.3	2	2
610	Conduit placement, RV to PA	1.2	0.3	3	2
3520	Conduit placement, RV to PA, Valved		0.3		2
3530	Conduit placement, RV to PA, Non-valved		0.3		2
270	PAPVC, Scimitar, Repair	0.6	0.3	2	2

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1290	Coronary artery fistula ligation	0.6	0.3	2	2
1291	Anomalous origin of coronary artery from pulmonary artery repair	0.5	0.3	2	2
140	VSD creation/enlargement	1.8	0.3	4	2
820	LV to aorta tunnel repair	0.4	0.3	2	2
1330	PDA closure, Surgical	0.4	0.3	2	2
****2710	Pulmonary atresia - VSD - MAPCA repair, Status post prior complete unifocalization (includes VSD closure + RV to PA connection [with or without conduit])	1.7	0.3	4	2
40	Asd, device (ASD repair, device)		0.3		2
*2310	Valvuloplasty converted to valve replacement in the same operation, Aortic/Neo-Aortic - with Ross procedure	1.2	0.3	3	2
1690	Bilateral bidirectional cavopulmonary anastomosis (BBDCPA) (Bilateral bidirectional Glenn)	0.4	0.3	2	2
5015	(30+600) ASD repair, Patch + Valve replacement, Pulmonary or Neo-Pulmonary (PVR )		0.3		2
720	Aortic root replacement, Mechanical	0.5	0.3	2	2
5007	(260+20) PAPVC repair + ASD repair, Primary closure		0.3		2
5016	(110+580) VSD repair, Patch + Conduit reoperation		0.3		2
550	PA, Reconstruction (Plasty), Branch, Peripheral (At or beyond the hilar bifurcation)	0.7	0.3	2	2
130	VSD, Multiple, Repair	0.7	0.3	2	2
***2130	Superior Cavopulmonary anastomosis(es) + PA reconstruction	0.4	0.3	2	2

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5023	(110+600) VSD repair, Patch + Valve replacement, Pulmonary or Neo-Pulmonary (PVR )		0.4		2
*****3460	Coarctation repair, Descending aorta anastomosed to ascending aorta	0.8	0.4	3	2
1774	Conduit placement, Ventricle to aorta	0.9	0.4	3	2
*****3220	Removal of transcatheter delivered device from heart	0.8	0.4	3	2
910	Partial left ventriculectomy (LV volume reduction surgery) (Batista)	0.7	0.4	2	2
*2300	Valvuloplasty, Common atrioventricular valve	1.3	0.4	4	2
*****3210	Removal of transcatheter delivered device from blood vessel	0.7	0.4	2	2
1650	PA debanding	1.4	0.4	4	2
330	Anomalous systemic venous connection repair	0.8	0.4	3	2
120	VSD repair, Device		0.4		2
1110	Arterial switch operation (ASO)	0.8	0.4	3	2
630	Valve excision, Pulmonary (without replacement)		0.4		2
1802	Pulmonary embolectomy, Acute pulmonary embolus	0.9	0.4	3	2
1790	Ligation, Pulmonary artery	0.6	0.4	2	2
1980	Sternotomy wound drainage		0.4		2
****2700	Pulmonary atresia - VSD - MAPCA repair, Complete single stage repair (1-stage that includes bilateral pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])	2.3	0.4	4	2
310	Atrial baffle procedure (Non-Mustard, Non-Senning)	0.7	0.4	2	2

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930	Pericardiectomy	0.5	0.4	2	2
790	Aortic stenosis, Supraaortic, Repair	0.5	0.4	2	2
170	AVC (AVSD) repair, Complete (CAVSD)	0.8	0.4	3	2
1050	Congenitally corrected TGA repair, Atrial switch and ASO (Double switch)	3.4	0.4	5	2
1080	Congenitally corrected TGA repair, VSD closure and LV to PA conduit	1.7	0.4	4	2
1200	DOLV repair	1.4	0.4	4	2
1780	Pulmonary AV Fistula repair/occlusion		0.4		2
5020	(580+680) Conduit reoperation + Valve replacement, Aortic/Neo-Aortic/Truncal (AVR), Mechanical		0.4		2
420	Pulmonary atresia - VSD (including TOF, PA) repair	1.1	0.4	3	2
****2790	Fontan, TCPC, Intra/extracardiac conduit, Nonfenestrated	0.6	0.4	2	2
1760	Cardiac tumor resection	1.4	0.4	4	2
3770	Resection of pericardial teratoma		0.4		2
3710	Cardiac tumor resection, Resection of atrial myxoma		0.4		2
3700	Cardiac tumor resection, Resection of ventricular rhabdomyoma		0.4		2
3720	Cardiac tumor resection, Resection of Other tumor		0.4		2
**1285	Aortic arch repair + VSD repair	1.7	0.4	4	2
250	Valve replacement, Truncal valve	0.7	0.4	2	2
3800	Valve replacement, Truncal, Bioprosthetic		0.4		2

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3790	Valve replacement, Truncal, Mechanical		0.4		2
3810	Valve replacement, Truncal, Homograft		0.4		2
960	Fontan, Atrio-ventricular connection	0.9	0.4	3	2
3300	Takedown of superior cavopulmonary anastomosis		0.4		2
****3180	Intravascular stent removal	0.6	0.4	2	2
60	ASD creation/enlargement	2.5	0.4	4	2
750	Konno procedure	0.8	0.4	3	2
1730	Aneurysm, Ventricular, Left, Repair	0.5	0.4	2	2
465	Ebstein's repair	1.6	0.4	4	2
620	Conduit placement, LV to PA	0.5	0.4	2	2
*2210	TGA, Other procedures (Kawashima, LV-PA conduit, other)	2.4	0.4	4	2
****1145	Atrial baffle procedure, Mustard or Senning revision	1.2	0.4	3	2
5033	(600+2350) Valve replacement, Pulmonary or Neo-Pulmonary (PVR) + explantation of pacing system		0.4		2
****2720	Pulmonary atresia - VSD - MAPCA repair, Status post prior incomplete unifocalization (includes completion of pulmonary unifocalization + VSD closure + RV to PA connection [with or without conduit])	2.1	0.4	4	2
5024	(110+260) VSD repair, Patch + PAPVC repair		0.4		2
3690	Cardiac tumor resection, Resection of ventricular fibroma		0.5		3
*****3470	Coarctation repair, Extra-anatomic Bypass graft	0.8	0.5	3	3
**1275	Coarctation repair + VSD repair	0.8	0.5	3	3

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1740	Aneurysm, Pulmonary artery, Repair	0.8	0.5	3	3
****2750	Unifocalization MAPCA(s), Unilateral pulmonary Unifocalization	1.3	0.5	4	3
340	Systemic venous stenosis repair	0.7	0.5	2	3
70	ASD partial closure	0.9	0.5	3	3
1070	Congenitally corrected TGA repair, VSD closure	0.5	0.5	2	3
1180	DORV, Intraventricular tunnel repair	1.4	0.5	4	3
*****3410	DORV repair, No Ventriculotomy	1.4	0.5	4	3
*****3420	DORV repair, Ventriculotomy, Nontransannular patch	1.4	0.5	4	3
*****3430	DORV repair, Ventriculotomy, Transannular patch	1.4	0.5	4	3
*****3440	DORV repair, RV-PA conduit	1.4	0.5	4	3
450	Occlusion MAPCA(s)	0.8	0.5	3	3
1280	Aortic arch repair	1.4	0.5	4	3
****3150	Hepatic vein to azygous vein connection, Interposition Graft	0.7	0.5	2	3
380	TOF repair, RV-PA conduit	0.7	0.5	2	3
950	Fontan, Atrio-pulmonary connection	0.4	0.5	2	3
50	ASD, Common atrium (Single atrium), Septation	0.6	0.5	2	3
****2770	Hybrid Approach, Transcardiac transcatheter device Placement	0.6	0.5	2	3
1140	Mustard	1.1	0.5	3	3

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*2270	Valvuloplasty converted to valve replacement in the same operation, Pulmonic	0.6	0.6	2	3
3680	RV to PA Shunt, (e.g. Sano Shunt or palliative RV-PA non-valved conduit to augment pulmonary blood flow)		0.6		3
*2190	Aortic root translocation over left ventricle (Including Nikaidoh procedure)	2.4	0.6	4	3
1300	Coronary artery bypass	1.5	0.6	4	3
920	Pericardial drainage procedure	1.3	0.6	4	3
700	Valve replacement, Aortic/Neo-Aortic (AVR), Homograft	1	0.6	3	3
5018	(370+1360) TOF repair, Ventriculotomy, Transanular patch + Vascular ring repair		0.6		3
*****3350	PA reconstruction branch, peripheral, at or beyond the 1st lobar branch, proximal to first segmental branch)	1.2	0.6	3	3
890	Transplant, Heart	1.4	0.6	4	3
850	Valve replacement, Mitral (MVR)	1.3	0.6	4	3
5025	(600+680) Valve replacement, Pulmonary or Neo-Pulmonary (PVR) + Valve replacement, Aortic/Neo-Aortic/Truncal (AVR), Mechanical		0.6		3
*2260	Valvuloplasty converted to valve replacement in the same operation, Mitral	1.3	0.6	4	3
1320	Interrupted aortic arch repair	2.1	0.6	4	3
80	Atrial septal fenestration	2.6	0.6	4	3
****3140	Hepatic vein to azygous vein connection, Direct	0.7	0.7	2	2
3580	Transplant, Heart and Kidney (Combined procedure)		0.7		3

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5005	(830+660) Mitral or systemic atrioventricular Valvuloplasty + Valvuloplasty, Aortic/Neo-Aortic/Truncal		0.7		3
5022	(190+110) AVC (AVSD) repair, Partial (Incomplete) (PAVSD) + VSD repair, Patch		0.7		3
1230	Coarctation repair, Subclavian flap	0.7	0.7	2	3
1035	Ventricular septation		0.7		3
3640	Ventricular septation, Following prior Norwood or DKS procedure		0.7		3
3630	Ventricular septation, Following prior Hybrid Stage 1		0.7		3
3610	Ventricular septation, Following superior cavopulmonary anastomosis or hemifontan		0.7		3
3620	Ventricular septation, Following prior total cavopulmonary connection		0.7		3
150	Ventricular septal fenestration	0.8	0.7	3	3
1160	REV	1.1	0.7	3	3
1804	Pulmonary embolectomy, Chronic pulmonary embolus		0.7		3
470	Valve replacement, Tricuspid (TVR)	0.7	0.7	2	3
*****3360	PA reconstruction branch, peripheral, (at or beyond 1st lobar branch, beyond first segmental branch)	1.4	0.7	4	3
**1120	Arterial switch operation (ASO) and VSD repair	1.4	0.7	4	3
440	Unifocalization MAPCA(s)	1.7	0.7	4	3
*****3310	Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Fenestrated	0.6	0.8	2	3
490	Valve excision, Tricuspid (Without replacement)	1.5	0.8	4	3

**Appendix C: The Society of Thoracic Surgeons - European Association for Cardio-Thoracic Surgery Congenital Heart Surgery Mortality Categories (STAT Mortality Categories) (May 5, 2022)**

Procedure Harvest codes highlighted in orange are procedures that currently exist in the CHSD and will be analyzed with their new STAT Score beginning with the Spring 2022 data analysis.

Procedure Harvest codes highlighted in blue, while not available on the current 3.41 data collection form, will be analyzed as such starting with the Spring 2022 analysis and will be available for coding with version 6.23.1.

Procedure Harvest codes highlighted in green are new procedures added in Version 6.23.1

Procedure Harvest Code	Procedure Name	STAT Mortality Score	New STAT Mortality Score	STAT Mortality Category	New STAT Mortality Category
*2150	Hybrid approach "Stage 2", Aortopulmonary amalgamation + Superior Cavopulmonary anastomosis(es) + PA Debanding + Without aortic arch repair	3.6	0.8	5	3
5010	(1000+1460) Fontan, TCPC, External conduit, Fenestrated + Pacemaker procedure		0.8		3
****3320	Fontan, TCPC, External conduit, hepatic veins to pulmonary artery, Nonfenestrated	0.6	0.8	2	3
****2760	Hybrid Approach, Transcardiac balloon dilation	0.5	0.8	2	3
1660	Damus-Kaye-Stansel procedure (DKS) (Creation of AP anastomosis without arch reconstruction)	2.9	0.8	5	3
*****3380	Extended ventricular septoplasty (modified Konno, VSD creation and patch enlargement of LVOT, sparing aortic valve) for tunnel type sub aortic stenosis	1.2	0.9	3	3
1060	Congenitally corrected TGA repair, Atrial switch and Rastelli	3.2	0.9	5	3
1590	Shunt, Systemic to pulmonary, Modified Blalock-Taussig shunt (MBTS)	1.5	0.9	4	3
5027	(170+1360) AVC (AVSD) repair, Complete (CAVSD) + Vascular ring repair		0.9		3
****2730	Unifocalization MAPCA(s), Bilateral pulmonary unifocalization - Complete unifocalization (all usable MAPCA[s] are incorporated)	1.6	1	4	4
280	TAPVC repair	1.9	1	4	4
5008	(1285+30) Aortic arch repair + VSD repair + ASD repair, Patch		1		4
760	Ross-Konno procedure	1.6	1	4	4
1025	Fontan revision or conversion (Re-do Fontan)	1.4	1	4	4

**Appendix C: The Society of Thoracic Surgeons - European Association for Cardio-Thoracic Surgery Congenital Heart Surgery Mortality Categories (STAT Mortality Categories) (May 5, 2022)**

Procedure Harvest codes highlighted in orange are procedures that currently exist in the CHSD and will be analyzed with their new STAT Score beginning with the Spring 2022 data analysis.

Procedure Harvest codes highlighted in blue, while not available on the current 3.41 data collection form, will be analyzed as such starting with the Spring 2022 analysis and will be available for coding with version 6.23.1.

Procedure Harvest codes highlighted in green are new procedures added in Version 6.23.1

Procedure Harvest Code	Procedure Name	STAT Mortality Score	New STAT Mortality Score	STAT Mortality Category	New STAT Mortality Category
*2320	Valvuloplasty converted to valve replacement in the same operation, Aortic/Neo-Aortic - with Ross- Konno procedure	1.9	1	4	4
1130	Senning	1.6	1	4	4
390	TOF - AVC (AVSD) repair	1.6	1	4	4
3750	Cardiac tumor resection, Resection + PDA closure, Surgical, Resection of Atrial myxoma		1.1		4
3730	Cardiac tumor resection, Resection + PDA closure, Surgical, Resection of ventricular fibroma		1.1		4
3740	Cardiac tumor resection, Resection + PDA closure, Surgical, Resection of ventricular rhabdomyoma		1.1		4
3760	Cardiac tumor resection, Resection + PDA closure, Surgical, Resection of Other tumor		1.1		4
*2250	Valvuloplasty converted to valve replacement in the same operation, Common atrioventricular valve	1.9	1.1	4	4
480	Valve closure, Tricuspid (Exclusion, Univentricular approach)	2.6	1.1	4	4
*2330	Superior cavopulmonary anastomosis(es) (Glenn or HemiFontan) + Atrioventricular valvuloplasty	1.4	1.1	4	4
5000	(1590+1330) Shunt, Systemic to pulmonary, Modified Blalock-Taussig Shunt (MBTS) + PDA closure, Surgical		1.1		4
****2755	Conduit insertion right ventricle to pulmonary artery + Intraventricular tunnel left ventricle to neo-aorta + Arch reconstruction (Rastelli and Norwood type arch reconstruction) (Yasui)	3.6	1.1	5	4
730	Aortic root replacement, Homograft	1.7	1.1	4	4
5028	(110+2110) VSD repair, Patch + ASD repair, Patch + PAPVC repair		1.1		4

**Appendix C: The Society of Thoracic Surgeons - European Association for Cardio-Thoracic Surgery Congenital Heart Surgery Mortality Categories (STAT Mortality Categories) (May 5, 2022)**

Procedure Harvest codes highlighted in orange are procedures that currently exist in the CHSD and will be analyzed with their new STAT Score beginning with the Spring 2022 data analysis.

Procedure Harvest codes highlighted in blue, while not available on the current 3.41 data collection form, will be analyzed as such starting with the Spring 2022 analysis and will be available for coding with version 6.23.1.

Procedure Harvest codes highlighted in green are new procedures added in Version 6.23.1

Procedure Harvest Code	Procedure Name	STAT Mortality Score	New STAT Mortality Score	STAT Mortality Category	New STAT Mortality Category
5021	(1760+1330) Cardiac tumor resection + PDA closure, Surgical		1.1		4
300	Pulmonary venous stenosis repair	2	1.1	4	4
*****3370	RV Rehabilitation, Endocardial resection	1.3	1.2	4	4
5003	(540+1590) PA, reconstruction (plasty), Branch, Central (within the hilar bifurcation) + Shunt, Systemic to pulmonary, Modified Blalock-Taussig Shunt (MBTS)		1.2		4
*2280	Valvuloplasty converted to valve replacement in same operation, Tricuspid	0.8	1.2	3	4
1600	Shunt, Systemic to pulmonary, Central (From aorta or to main pulmonary artery)	2.1	1.2	4	4
3600	Fontan, Takedown		1.2		4
2095	Shunt, Reoperation		1.2		4
1640	PA banding (PAB), Placement of main pulmonary artery band	1.7	1.2	4	4
3860	PA banding (PAB), Placement of unilateral or bilateral branch pulmonary artery band(s) without the need for concomitant PGE and/or ductal stent		1.2		4
****3130	Shunt, Systemic to pulmonary, Central (shunt from aorta), Central shunt with an end-to- side connection between the transected main pulmonary artery and the side of the ascending aorta (i.e. Mee shunt)	1.6	1.2	4	4
900	Transplant, Heart and lung	3.2	1.2	5	4
5002	(540+890) PA, reconstruction (plasty), Branch, Central (within the hilar bifurcation) + Transplant, Heart		1.3		4
1410	Transplant, Lung(s)	0.8	1.3	3	4

**Appendix C: The Society of Thoracic Surgeons - European Association for Cardio-Thoracic Surgery Congenital Heart Surgery Mortality Categories (STAT Mortality Categories) (May 5, 2022)**

Procedure Harvest codes highlighted in orange are procedures that currently exist in the CHSD and will be analyzed with their new STAT Score beginning with the Spring 2022 data analysis.

Procedure Harvest codes highlighted in blue, while not available on the current 3.41 data collection form, will be analyzed as such starting with the Spring 2022 analysis and will be available for coding with version 6.23.1.

Procedure Harvest codes highlighted in green are new procedures added in Version 6.23.1

Procedure Harvest Code	Procedure Name	STAT Mortality Score	New STAT Mortality Score	STAT Mortality Category	New STAT Mortality Category
*2290	Valvuloplasty converted to valve replacement in the same operation, Truncal valve	1	1.3	3	4
1390	Aortic dissection repair	1.7	1.3	4	4
230	Truncus arteriosus repair	2.4	1.3	4	4
5031	(420+20+1330) Pulmonary atresia - VSD (including TOF, PA) repair + ASD repair, Primary closure + PDA closure, Surgical		1.3		4
*****3450	DORV-AVC (AVSD) repair	1.7	1.3	4	4
3570	Transplant, Heart and Liver (Combined procedure)		1.3		4
3590	Transplant, Heart and Liver and Kidney (Combined procedure)		1.4		4
5011	(440+610) Unifocalization MAPCA(s) + Conduit placement, RV to PA		1.4		4
400	TOF - Absent pulmonary valve repair	1.5	1.4	4	4
*****3400	Double root translocation	2.6	1.5	4	4
*****3390	LV Endocardial Fibroelastosis resection	1.9	1.5	4	4
880	Biventricular repair for hypoplastic left ventricle	1.9	1.5	4	4
5035	(610+720) Conduit placement, RV to PA + Aortic root replacement, Mechanical		1.5		4
5034	(170+1220) AVC (AVSD) repair, Complete (CAVSD) + Coarctation repair, End to end, Extended		1.5		4
3480	AVC (AVSD) repair, Complete (CAVSD) + Arch repair		1.5		4
5013	(610+1330) Conduit placement, RV to PA + PDA closure, Surgical		1.6		4

**Appendix C: The Society of Thoracic Surgeons - European Association for Cardio-Thoracic Surgery Congenital Heart Surgery Mortality Categories (STAT Mortality Categories) (May 5, 2022)**

Procedure Harvest codes highlighted in orange are procedures that currently exist in the CHSD and will be analyzed with their new STAT Score beginning with the Spring 2022 data analysis.

Procedure Harvest codes highlighted in blue, while not available on the current 3.41 data collection form, will be analyzed as such starting with the Spring 2022 analysis and will be available for coding with version 6.23.1.

Procedure Harvest codes highlighted in green are new procedures added in Version 6.23.1

Procedure Harvest Code	Procedure Name	STAT Mortality Score	New STAT Mortality Score	STAT Mortality Category	New STAT Mortality Category
2140	Hybrid approach "Stage 2", Aortopulmonary amalgamation + Superior Cavopulmonary anastomosis(es) + PA Debanding + Aortic arch repair (Norwood [Stage 1] + Superior Cavopulmonary anastomosis(es) + PA Debanding)	4.1	1.6	5	4
5009	(1370+1440) Pulmonary artery sling repair + Tracheal procedure		1.7		4
**1125	Arterial switch procedure and VSD repair + Aortic arch repair	2.4	1.8	4	5
****2740	Unifocalization MAPCA(s), Bilateral pulmonary unifocalization - Incomplete unifocalization (not all usable MAPCA[s] are incorporated)	1.5	1.9	4	5
*****3230	Shunt, Systemic to pulmonary, Potts – Smith type (descending aorta to pulmonary artery)	2	1.9	4	5
*2230	Valve replacement, Common atrioventricular valve	1.9	1.9	4	5
**2220	Truncus + IAA Repair	5	2	5	5
870	Norwood procedure	4	2.1	5	5
5014	(440+1600) Unifocalization MAPCA(s) + Shunt, Systemic to pulmonary, Central (shunt from aorta )		2.4		5
*2170	Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)	2.5	2.7	4	5
5019	(300+70) Pulmonary venous stenosis repair + ASD partial closure		2.8		5
*2180	Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA and LPA bands	3.1	3	5	5
5030	(465+1330) Ebstein's repair + PDA closure, Surgical		3		5
5017	(1660+1590) Damus-Kaye-Stansel procedure (DKS) (creation of AP anastomosis without arch reconstruction) + Shunt, Systemic to pulmonary, Modified Blalock-Taussig Shunt (MBTS )		3.2		5

**Appendix C: The Society of Thoracic Surgeons - European Association for Cardio-Thoracic Surgery Congenital Heart Surgery Mortality Categories (STAT Mortality Categories) (May 5, 2022)**

Procedure Harvest codes highlighted in orange are procedures that currently exist in the CHSD and will be analyzed with their new STAT Score beginning with the Spring 2022 data analysis.

Procedure Harvest codes highlighted in blue, while not available on the current 3.41 data collection form, will be analyzed as such starting with the Spring 2022 analysis and will be available for coding with version 6.23.1.

Procedure Harvest codes highlighted in green are new procedures added in Version 6.23.1

Procedure Harvest Code	Procedure Name	STAT Mortality Score	New STAT Mortality Score	STAT Mortality Category	New STAT Mortality Category
5026	(760+850) Ross-Konno procedure + Valve replacement, Mitral or systemic atrioventricular Valve (MVR)		3.5		5
5012	(870+460+610) Norwood procedure+Valvuloplasty, Systemic Atrioventricular valve+Conduit placement, RV to PA		4.3		5
5037	(1640+2300) PA banding (PAB) + Valvuloplasty, Common atrioventricular valve		4.5		5
*2160	Hybrid Approach "Stage 1", with application of RPA & LPA bands with concomitant use of PGE to maintain ductal patency	2.6	4.8	4	5
*2200	TAPVC repair + Shunt - Systemic to pulmonary	3	4.9	5	5
5006	(2200+1330) TAPVC repair + Shunt - systemic-to-pulmonary + PDA closure, Surgical		5		5

\*Indicates that this Procedure, Score, and Category were not included in the original JTCVS publication [6] but were subsequently assigned as part of the upgrade to version 3.0. The original list of procedure codes was based on Version 2.5 of the STS Congenital Heart Surgery Database. These additional procedures represent the list of new procedure codes that were added to The STS Congenital Heart Surgery Database in 2010 as part of the upgrade to version 3.0, and have also been incorporated into The EACTS Congenital Heart Surgery Database, and The Japan Congenital Cardiovascular Surgery Database (JCCVSD). To assign scores to these new procedures, a panel of highly experienced congenital heart surgeons from programs representing a variety of programmatic volume categories were surveyed and asked to provide an STS-EACTS Mortality Score for 26 procedures that were new to version 3.0, using the scores in the Table of the JTCVS article [6] as a guide. The mean of the scores from these ten surgeons was then used to assign the STS-EACTS Mortality Score and STS-EACTS Mortality Category for these 26 new procedures. (When the highest and lowest scores were discarded, the scores were essentially the same. [9/23 scores did not change, 13/23 scores change by only 0.1, and 1/23 scores change by 0.2]).

\*\*Indicates a combined procedure (made up of two or more component procedures).

\*\*\*Indicates a combined procedure and also a procedure for which the Score and Category were not part of the original JTCVS publication [6] and were assigned later as described above.

## **Appendix C: The Society of Thoracic Surgeons - European Association for Cardio-Thoracic Surgery Congenital Heart Surgery Mortality Categories (STAT Mortality Categories) (May 5, 2022)**

\*\*\*\*Indicates that this Procedure, Score, and Category were not included in the original JTCVS publication [6] but were subsequently assigned as part of the upgrade to version 3.22. The original list of procedure codes was based on Version 2.5 of the STS Congenital Heart Surgery Database. These additional procedures represent the list of new procedure codes that were added to The STS Congenital Heart Surgery Database in 2014 as part of the upgrade to version 3.22, and have also been incorporated into The EACTS Congenital Heart Surgery Database, and The Japan Congenital Cardiovascular Surgery Database (JCCVSD). To assign scores to these new procedures, a panel of highly experienced congenital heart surgeons from programs representing a variety of programmatic volume categories were surveyed and asked to provide an STS-EACTS Mortality Score for 16 procedures that were new to version 3.22, using the STAT scores provided in the STS Congenital Heart Surgery Database Spring 2014 Feedback Report as a guide. The mean of the scores from these seventeen surgeons was then used to assign the STS-EACTS Mortality Score and STS-EACTS Mortality Category for these 16 new procedures. (When the high and low scores were discarded, the STAT Scores were essentially the same. [12/16 scores did not change and 4/16 scores change by only 0.1]; meanwhile, when the high and low scores were discarded, the STAT Categories were all unchanged.)

\*\*\*\*\*Indicates that this Procedure, Score, and Category were not included in the original JTCVS publication [6] but were subsequently assigned as part of the upgrade to version 3.3. The original list of procedure codes was based on Version 2.5 of the STS Congenital Heart Surgery Database. These additional procedures represent the list of new procedure codes that were added to The STS Congenital Heart Surgery Database in 2016 as part of the upgrade to version 3.3, and have also been incorporated into The EACTS Congenital Heart Surgery Database, and The Japan Congenital Cardiovascular Surgery Database (JCCVSD). To assign scores to these new procedures, a panel of highly experienced congenital heart surgeons from programs representing a variety of programmatic volume categories were surveyed and asked to provide an STS-EACTS Mortality Score for 7 procedures that were new to version 3.3, using the STAT scores provided in the STS Congenital Heart Surgery Database Spring 2016 Feedback Report as a guide. The mean of the scores from these seventeen surgeons was then used to assign the STS-EACTS Mortality Score and STS-EACTS Mortality Category for these 7 new procedures. (When the high and low scores were discarded, the STAT Scores were essentially the same.)

\*\*\*\*\*Indicates that this Procedure, Score, and Category were not included in the original JTCVS publication [6] but were subsequently assigned as part of the upgrade to version 3.41. The original list of procedure codes was based on Version 2.5 of the STS Congenital Heart Surgery Database. These additional procedures represent the list of new procedure codes that were added to The STS Congenital Heart Surgery Database in 2019 as part of the upgrade to version 3.41, and have also been incorporated into The EACTS Congenital Heart Surgery Database, and The Japan Congenital Cardiovascular Surgery Database (JCCVSD). To assign scores to these new procedures, a panel of highly experienced congenital heart surgeons from programs representing a variety of programmatic volume categories were surveyed and asked to provide an STS-EACTS Mortality Score for 9 procedures that were new to version 3.41, using the STAT scores provided in the STS Congenital Heart Surgery Database Spring 2018 Feedback Report as a guide. The mean of the scores from these seventeen surgeons was then used to assign the STS-EACTS Mortality Score and STS-EACTS Mortality Category for these 9 new procedures. (When the high and low scores were discarded, the STAT Scores were essentially the same.)