STS National Database™
Trusted. Transformed. Real-Time.

Society of Thoracic Surgeons

Congenital Heart Surgery Database
Monthly Webinar

March 18, 2025

Agenda

- Welcome and Introduction
- STS Update
- STS Data Manager Education (Chasity Wellnitz and Leslie Wacker, CHSD Consultants)
- Q&A

STS Updates

- March Training Manual posted

- 2025 Harvest Schedule
  - Spring 2025 close date: harvest close is TBD (*originally scheduled for March 21*)
    - **STS Communication will be sent this week regarding new close date**
  - Fall 2025 close date: **September 26, 2025**

- Primary Procedure Mismatch Report Update
  - New process effective January 1, 2025
  - Replacing "Exception 1" aka "PSF rule"
  - New rules to be implemented in the S25 analysis
  - STS Education provided in the November 2024 Monthly Webinar

AQO 2025

- **CHSD and GTSD Sessions: Thursday, October 2nd**

- ACSD Session: Friday, October 3rd

- Grand Hyatt San Antonio Riverwalk

- AQO Session Proposal deadline is April 18th
  - **Learn more about submitting a session proposal**.

- Both In Person and Virtual options will be available

- Cost information will be shared as soon as it's available

Home › Calendar of Events › 2025 Advances in Quality & Outcomes: A Data Managers Meeting

📅 Event

2025 Advances in Quality & Outcomes: A Data Managers Meeting

Discussions on valuable research and important clinical findings with the goal of improving data collection and patient outcomes.

ADVANCES IN QUALITY & OUTCOMES: A Data Managers Meeting

OCTOBER 2-3, 2025 • SAN ANTONIO, TX

📅 Date(s)
Oct 2—3, 2025

📍 Location
San Antonio, TX

👥 Audience
Allied Health
Data Manager

Education Discussion Topics

Education Updates:

- Database discharge dates

- PDA ligation

Analysis Updates:

- Primary procedure determination with combo codes and tied STAT mortality scores

Database Discharge Dates by Version

Version 3.41

- (4250) Date of Database Discharge

- (4260) Mortality Status at Database Discharge

Version 6.23.2

- (4920) End-date of database tracking

- (4925) Status at end of database tracking

- (4935) Date of Database Discharge – *autocalculated*

- (4940) Mortality Status at Database Discharge – *autocalculated*

Database Discharge Date Completion

- Completed on every operative record

  – Can be vendor dependent – only complete one time

- Ensure accuracy when completing a case

  – All operative records within the episode of care should have the same database discharge dates and status

  – If updating one operative record, must update all (not just the index)

Database Discharge Date Example

- Patient with 1 episode of care; entered into the database:

AdmitDt	SurgDt	Primary Procedure	DBDischDt
01/01/24	01/06/24	(870) Norwood procedure	03/31/24
01/01/24	01/07/24	(1970) Mediastinal exploration	03/31/24
01/01/24	01/08/24	(1960) Delayed sternal closure	03/31/24
01/01/24	02/20/24	(2095) Shunt, Reoperation	04/29/24

Database Discharge Date Example

- Patient with 1 episode of care, entered into the database:

AdmitDt	SurgDt	Primary Procedure	DBDischDt
01/01/24	01/06/24	(870) Norwood procedure	03/31/24
01/01/24	01/07/24	(1970) Mediastinal exploration	03/31/24
01/01/24	01/08/24	(1960) Delayed sternal closure	03/31/24
01/01/24	02/20/24	(2095) Shunt, Reoperation	04/29/24

Analyzed as separate EOC

Database Discharge Date Completion

- Errors in coding can impact analysis:
  - Surgical volume
  - Postoperative LOS
  - Mortality calculation
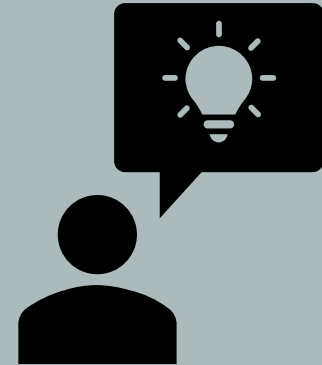
Review discharge fields for every operative record, not just the index operation

Ductus Arteriosus

- Blood vessel connecting the pulmonary artery to the aorta during fetal life to shunt blood away from the lungs

- Following birth, the vessel normally closes within a few days

- Remnants of the vessel remain as a non-functional fibrous band - *ligamentum arteriosum*

Patent Ductus Arteriosus

- The fetal blood vessel fails to close following birth

- Common in premature babies

- Can lead to heart failure as too much blood is pumped into the pulmonary arteries

Patent Ductus Arteriosus
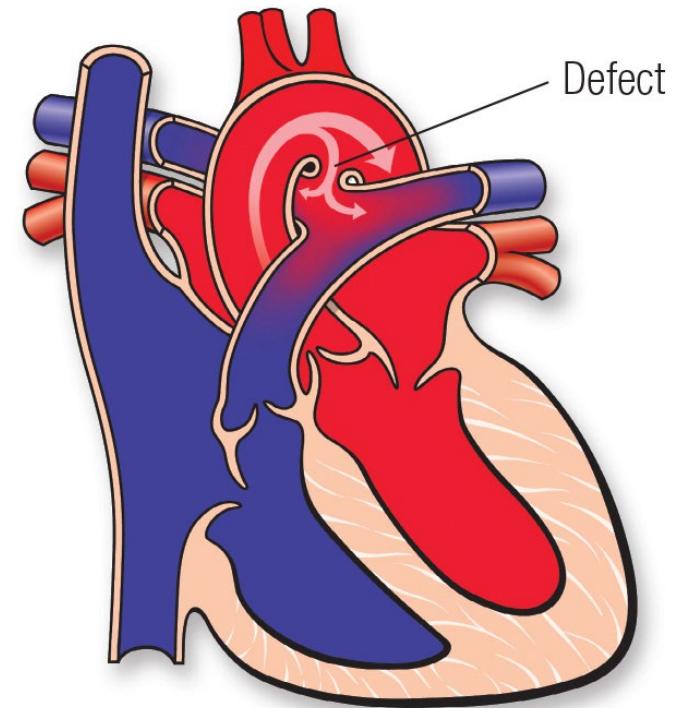
Defect

Ligamentum Arteriosum

Right Aortic Arch
Retroesophageal
Left Subclavian Artery;
Left Ligamentum

RC
RSA
trachea
esophagus
R Arch
LC
LSA
Ao
PA
recurrent
laryngeal
nerve
ligamentum
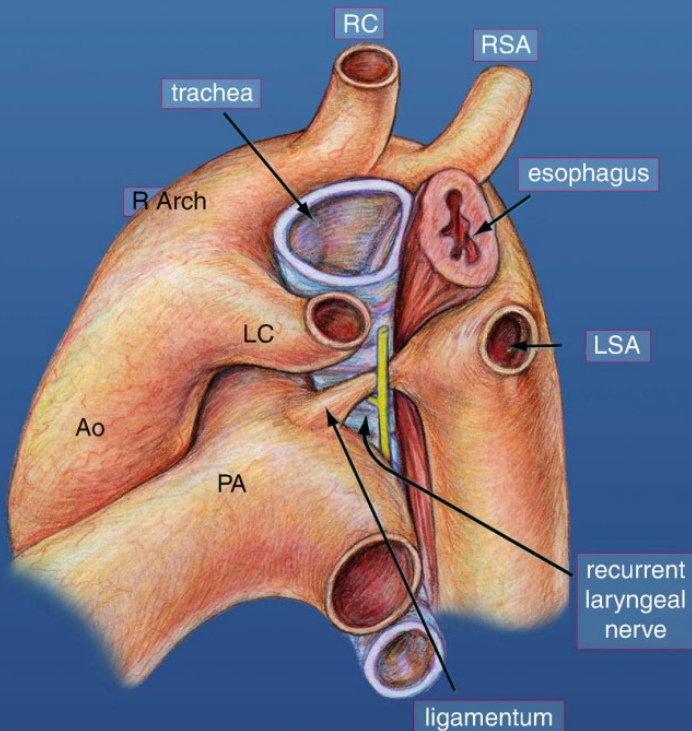
- Can be involved in vascular rings and coarctation defects

- May require ligation as part of other procedures later in life

https://link.springer.com/chapter/10.1007/978-3-030-14163-9_3; Accessed 2025-03-16

Patent Ductus Arteriosus (PDA) Closure

- **(1330) PDA closure, Surgical (0.2 / 2)**

  Closure of a PDA by any surgical technique (ligation, division, clip) using any approach (i.e., thoracotomy, thoracoscopic, etc.)

- **(1340) PDA closure, Device (no STAT score)**

  Closure of a PDA by device using transcatheter techniques

Patent Ductus Arteriosus (PDA) Closure

- ## (1330) PDA closure, Surgical (0.2 / 2)

  Closure of a PDA by any surgical technique (ligation, division, clip) using any approach (i.e., thoracotomy, thoracoscopic, etc.)

- ## (1340) PDA closure, Device (no STAT score)

  Closure of a PDA by device using transcatheter techniques

  Does not include ligation/division of the ligamentum arteriosum

Patent Ductus Arteriosus (PDA) Closure

- If coded as PDA closures, impacts analysis and results in inappropriate combination code creation

- Do **NOT** code ligamentum arteriosum ligations as PDA closure
  - Long list incorrectly maps to PDA ligation
  - Work with vendor to deactivate code

- Code as procedure (2010) Cardiac procedure, Other

Patent Ductus Arteriosus (PDA) Closure

TM Update:

PDA closure, Surgical	Closure of a patent ductus arteriosus (PDA) by any surgical technique (ligation, division, clip) using any approach (i.e., thoracotomy, thoracoscopic, etc.).
	Coding Notes: Does not include ligation/division of the ligamentum arteriosum; instead, code procedure (2010) Cardiac procedure, Other (update Mar-25).

Analysis Update

1. Combination codes – entered and derived

2. Tie breakers

Analysis Update – combination codes

Background:

- All individual codes are considered when creating combo codes

- All possible combinations are created

    o Component procedures are not considered

    o Analysis Overview

- Combo codes and other individual codes are then considered in the primary procedure algorithm

Background:

- All individual codes are considered when creating combo codes

- All

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> Some procedures will be mapped to available combination procedures. **The individual procedures that make up the combination procedures will not be removed but will remain as secondary procedures. These individual procedures that make up the combination procedures will not be considered for primary procedure determination.** For a list of the combination procedure codes, please refer to the STS Website.
>
> If there is a tie for highest STAT Mortality Score:
>
>   a. The procedure indicated as the primary by the participant will become the primary procedure.
>   b. If no procedure was selected as primary by the participant; the first procedure appearing in the procedures dataset will be selected as the primary procedure (this may, or may not, be the first procedure entered by the participant).

Page 5, Analysis Overview

Background:

- All individual codes are considered when creating combo codes

-

STS Combination Procedure Codes

Several procedures listed in the primary procedure difficulty rankings are actually combinations of 2 or more procedures. Because the complexity of the combination is regarded as being different from the complexity of the component procedures when performed in isolation, it is important to code these procedures using the combination code rather than coding each component separately.

A combination procedure should be coded when an operation includes the following component procedures:

- **1120 - Arterial switch operation (ASO) and VSD repair**
  1110 - Arterial switch operation (ASO)
  and

- procedure algorithm

Page 34, Analysis Overview

Analysis Update – combination codes

<u>Example:</u>

830 – Valvuloplasty, Mitral or Systemic Atrioventricular Valve

3540 - Valvuloplasty, Aortic/Neo-Aortic valve, Reduction of number of cusps/sinus resection

3680 – RV to PA Shunt (e.g. Sano Shunt or palliative RV-PA non-valved conduit to augment pulmonary blood flow)

870 - Norwood procedure

Analysis Update – combination codes

Example:

830 – Valvuloplasty, Mitral or Systemic Atrioventricular Valve

3540 - Valvuloplasty, Aortic/Neo-Aortic valve, Reduction of number of cusps/sinus resection

3680 – RV to PA Shunt (e.g. Sar pulmonary blood flow)

870 - Norwood procedure

5005 - Mitral or systemic atrioventricular Valvuloplasty + Valvuloplasty, Aortic/Neo-Aortic/Truncal (0.7 / 3)

Example:

830 – Valvuloplasty, Mitral or Systemic Atrioventricular Valve

3540 - Valvuloplasty, Aortic/Neo-Aortic valve, Reduction of number of cusps/sinus resection

3680 – RV to PA Shunt (

valved conduit to augn

870 - Norwood proced
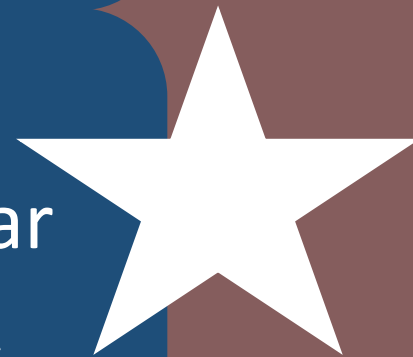
5012 - Norwood procedure + Valvuloplasty, Systemic Atrioventricular valve + RV to PA Shunt (v6.23.2) (4.3 / 5)

Analysis Update – combination codes

5005 - Mitral or systemic atrioventricular Valvuloplasty + Valvuloplasty, Aortic/Neo-Aortic/Truncal (0.7 / 3)

5012 - Norwood procedure + Valvuloplasty, Systemic Atrioventricular valve + Conduit placement, RV to PA (v6.23.2) (4.3 / 5)

Benchmark Operations: Mortality & Postoperative LOS (Table 18)
Please refer to the CHSD Risk Adjusted Calculation spreadsheet within the IQVIA Library for technical details

Operations are classified into the various benchmark operation groups according to the assigned primary procedure for that operation.

Note: PLOS is set to missing if >364 days from surgery date

Procedure Type	Abbreviation	STS-CHSDB Primary Procedure Codes
1. VSRoss arteriosus repair	truncVSD	1911 VSRarrensac 1 tpair
9. Norwood procedure	Norwood	870 = Norwood procedure 5012 = Norwood procedure+Valvuloplasty, Systemic Atrioventricular valve+Conduit placement, RV to PA
10. Off-Bypass Coarctation	Coarctation	1210 = Coarctation repair, End-to-end

Analysis Update – combination codes

In order to be defined as an Hypoplastic Left Heart Syndrome (HLHS) the record must contain one of the below Primary Diagnosis and Primary Procedure.

	B	C	D	E	F
2	Primary Diagnosis	Hypoplastic left heart syndrome	primdiag	730	
3	Primary Procedure	Norwood procedure	primaryproc	870	
4	Primary Procedure	Norwood procedure+Valvuloplasty	primaryproc	5012	
5	Primary Procedure	HLHS biventricular repair	primaryproc	880	
6	Primary Procedure	Transplant heart	primaryproc	890	
7	Index Operation	Index Operation	primaryop	1	
8					
9	Tab	Category	Subcategory	Display	CalculationName_Automation
11	Demographics	Incidence	Norwood + systemic AV Valve rep	N	STS_CHSD_OPERATIONID_BENCHMARK
15	Demographics	Incidence	Norwood + systemic AV Valve rep	%	STS_CHSD_OPERATIONID_BENCHMARK
19	Demographics	Age (days)	Norwood + systemic AV Valve rep	Mean	STS_CHSD_AGE_DAYS_BENCHMARK
23	Demographics	Age (days)	Norwood + systemic AV Valve rep	Median	STS_CHSD_AGE_DAYS_BENCHMARK
27	Demographics	Age (days)	Norwood + systemic AV Valve rep	Q1	STS_CHSD_AGE_DAYS_BENCHMARK
31	Demographics	Age (days)	Norwood + systemic AV Valve rep	Q3	STS_CHSD_AGE_DAYS_BENCHMARK
35	Demographics	Gender, Female	Norwood + systemic AV Valve rep	N	STS_CHSD_gender_BENCHMARK
39	Demographics	Gender, Female	Norwood + systemic AV Valve rep	%	STS_CHSD_gender_BENCHMARK
49	Features of Repair	DHCA	Norwood + systemic AV Valve rep	N	STS_CHSD_TOFR_TOFREPAIRNONV_BENCHMAR
53	Features of Repair	DHCA	Norwood + systemic AV Valve rep	%	STS_CHSD_TOFR_TOFREPAIRNONV_BENCHMAR
57	Operative Information	CPB Time (minutes)	Norwood + systemic AV Valve rep	Mean	STS_CHSD_CPBTm_BENCHMARK
61	Operative Information	CPB Time (minutes)	Norwood + systemic AV Valve rep	Median	STS_CHSD_CPBTm_BENCHMARK

Sheet tabs: ... | T25.av_canal | T26.aortic_stenosis_insufficien | T27.transposition_of_great_arte | **T28.hypoplastic_left_heart_synd** | T29.

Analysis Update – combination codes

Example:

5005 - Mitral or systemic atrioventricular Valvuloplasty + Valvuloplasty, Aortic/Neo-Aortic/Truncal (0.7 / 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)

870 - Norwood procedure (2.1 / 5)

Analysis Update – combination codes

| 9. Norwood procedure | Norwood | 870 = Norwood procedure |
| | | 5012 = Norwood procedure+Valvuloplasty, Systemic Atrioventricular valve+Conduit placement, RV to PA |

	B	C	D	E	F
1	n order to be defined as an Hypoplastic Left Heart Syndrome (HLHS) the record must contain one of the below Primary Diagnosis and Primary Procedure.				
2	Primary Diagnosis	Hypoplastic left heart syndrome	primdiag	730	
3	Primary Procedure	Norwood procedure	primaryproc	870	
4	Primary Procedure	Norwood procedure+Valvuloplasty	primaryproc	5012	
5	Primary Procedure	HLHS biventricular repair	primaryproc	880	
5	Primary Procedure	Transplant heart	primaryproc	890	

Example:

110 - VSD repair, Patch

20 - ASD repair, Primary closure

580 – Conduit reoperation

Analysis Update – combination codes

Example:

110 - VSD repair, Patch

20 - ASD repair, Primary closure

580 – Conduit reoperation

5001 = VSD repair, Patch + ASD repair, Primary closure (0.2 / 1)

Example:

110 - VSD repair, Patch

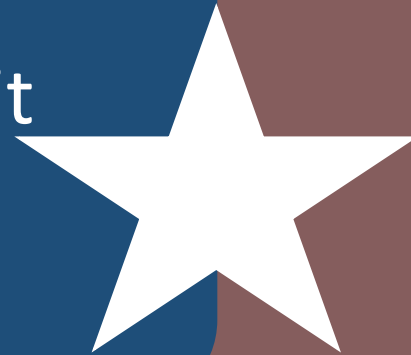20 - ASD repair, Primary closure

580 – Conduit reoperati

5016 = VSD, repair, Patch + Conduit reoperation (0.3 / 2)

Analysis Update – combination codes

5001 = VSD repair, Patch + ASD repair, Primary closure (0.2 / 1)

5016 = VSD, repair, Patch + Conduit reoperation (0.3 / 2)

Analysis Update – combination codes

5016 = VSD, repair, Patch + Conduit

Benchmark Operations: Mortality & Postoperative LOS (Table 18)

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Procedure Type	Abbreviation	STS-CHSDB Primary Procedure Codes
1. VSD repair	VSD	110 = VSD repair, Patch 5001 = VSD repair, Patch + ASD repair, Primary closure

Analysis Update – combination codes

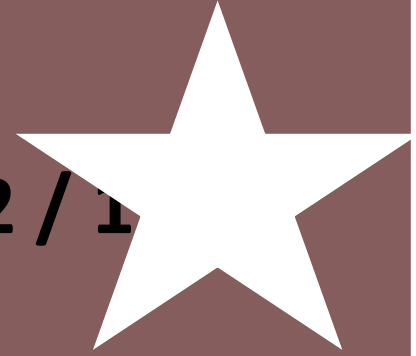## 5016 = VSD, repair, Patch + Conduit reoperation (0.3 / 2)

A	B	C	D	E
Ventricular Septal Defect (VSD)	Primary Diagnosis	VSD, Type 1 (Subarterial) (Supra	primdiag	71
	Primary Diagnosis	VSD, Type 2 (Perimembranous) (	primdiag	73
	Primary Diagnosis	VSD, Type 3 (Inlet) (AV canal typ	primdiag	75
	Primary Diagnosis	VSD, Type 4 (Muscular)	primdiag	77
	Primary Diagnosis	VSD, Type: Gerbode (LV-RA comm	primdiag	79
	Primary Diagnosis	VSD, Multiple	primdiag	80
	Primary Procedure	VSD repair, Primary closure	primaryproc	100
	Primary Procedure	VSD repair, Patch	primaryproc	110
	Primary Procedure	VSD repair, Device	primaryproc	120
	Primary Procedure	VSD repair, Multiple Repair	primaryproc	130
	Primary Procedure	Ventricular Septal fenestration	primaryproc	150
	Primary Procedure	VSD repair, Patch + ASD repair, F	primaryproc	5001
	Index Operation	Index Operation	primaryop	1

Example:

5001 - VSD repair, Patch + ASD repair, Primary closure (0.2 / 1

580 – Conduit reoperation (0.1 / 1)

Example:

5001 - VSD repair, Patch + ASD repair, Primary closure (0.2 / 1)

580 – Conduit reoperation (0.1 / 1)

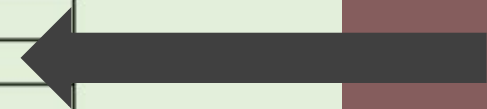| Procedure Type	Abbreviation	STS-CHSDB Primary Procedure Codes
1. VSD repair	VSD	110 = VSD repair, Patch 5001 = VSD repair, Patch + ASD repair, Primary closure

Example:

5001 - VSD repair, Patch + ASD repair, Primary closure (0.2 / 1)

580 – Cor

	A	B	C	D	E
Instructions: In order to be defined as an Ventricular Septal Defect (VSD) the record must contain one of the below Primary Diagnosis					
		Primary Diagnosis	VSD, Type 1 (Subarterial) (Supra	primdiag	71
		Primary Diagnosis	VSD, Type 2 (Perimembranous) (	primdiag	73
		Primary Diagnosis	VSD, Type 3 (Inlet) (AV canal typ	primdiag	75
		Primary Diagnosis	VSD, Type 4 (Muscular)	primdiag	77
		Primary Diagnosis	VSD, Type: Gerbode (LV-RA comm	primdiag	79
	Ventricular Septal Defect (VSD)	Primary Diagnosis	VSD, Multiple	primdiag	80
		Primary Procedure	VSD repair, Primary closure	primaryproc	100
		Primary Procedure	VSD repair, Patch	primaryproc	110
		Primary Procedure	VSD repair, Device	primaryproc	120
		Primary Procedure	VSD repair, Multiple Repair	primaryproc	130
		Primary Procedure	Ventricular Septal fenestration	primaryproc	150
		Primary Procedure	VSD repair, Patch + ASD repair, F	primaryproc	5001
		Index Operation	Index Operation	primaryop	1

STS/Proc   Tab   Category   Subcategory   Display   CalculationName

Example:

5001 - VSD repair, Patch + ASD repair, Primary closure (0.2 / 1)

580 – Cor

Example:

10 – PFO, Primary closure (0.1 / 1)

30 – ASD repair, Patch (0.1 / 1)

260 – PAPVC repair (0.1 / 1)*

Analysis Update – Tie Breakers

Example:

10 – PFO, Primary closure (0.1 / 1)

30 –

260

Some procedures will be mapped to available combination procedures. **The individual procedures that make up the combination procedures will not be removed but will remain as secondary procedures. These individual procedures that make up the combination procedures will not be considered for primary procedure determination.** For a list of the combination procedure codes, please refer to the STS Website.

If there is a tie for highest STAT Mortality Score:

   a.   The procedure indicated as the primary by the participant will become the primary procedure.
   b.   If no procedure was selected as primary by the participant; the first procedure appearing in the procedures dataset will be selected as the primary procedure (this may, or may not, be the first procedure entered by the participant).

EXCEPTIONS TO THE ABOVE STATED RULE:

Analysis Update – Tie Breakers

Example:

10 – PFO, Primary closure (0.1 / 1)

30 – ASD repair, Patch (0.1 / 1)

260 – PAPVC repair (0.1 / 1)

2110 = ASD repair, Patch + PAPVC Repair (0.1 / 1)

Analysis Update – Tie Breakers

Example:

10 – PFO, Primary closure (0.1 / 1)

2110 – ASD repair, Patch + PAPVC repair (0.1 / 1)

Example:

10 – PFO, Primary closure (0.1 /

2110 – ASD repair, Patch + PAPV...

Procedure Harvest Cod	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
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

Example:

10 – PFO, Primary closure (0.1 /

2110 – ASD repair, Patch + PAPV

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
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

Example:

10 – PFO, Primary closure (0.1 / 1)

2110 – ASD repair, Patch + PAPVC repair (0.1 / 1)

Example:

10 – PFO, Primary closure (0.1 / 1)

460 – Valvuloplasty, Tricuspid or Non-systemic Atrioventricular Valve (0.2 / 1)*

180 – AVC (AVSD) repair, Intermediate (Transitional) (0.1 / 1)

Analysis Update – Tie Breakers

Example:

10 – PFO, Primary closure (0.1 / 1)

460 – Valvuloplasty, Tricuspid or Non-

180 – AVC (AVSD) repair, Intermediate

1c.	
• 170 = AVC (AVSD) repair, Complete (CAVSD) • 3480 = AVC (AVSD) repair, Complete (CAVSD) + Arch repair • 5027 = AVC (AVSD) repair, Complete (CAVSD) + Vascular ring repair • 5034 = AVC (AVSD) repair, Complete (CAVSD) + Coarctation repair, End to end, Extended • **180 = AVC (AVSD) repair, Intermediate (Transitional)** • 190 = AVC (AVSD) repair, Partial, Incomplete (PAVSD)	• 1330 = PDA Closure, Surgical • 1630 = Shunt, Ligation and takedown • 1650 = PA debanding • 70 = ASD Partial Closure • 60 = ASD Creation Enlargement • 80 = Atrial Septal Fenestration • 3200 = PA band adjustment • 530 = PA, reconstruction (plasty), Main (trunk) • 540 = PA, reconstruction (plasty), Branch, Central (within the hilar bifurcation) • 50 = ASD, Common atrium (single atrium), Septation • 150 = Ventricular septal fenestration • **460 = Valvuloplasty, Tricuspid or Non-systemic** Atrioventricular Valve (do not use this code if tricuspid valve malfunction is secondary to Ebstein's anomaly. Use 465= Ebstein's repair) • 500 = Valve surgery, Other, Tricuspid or Non-systemic Atrioventricular Valve • 2280 = Valvuloplasty converted to valve replacement in the same operation, Tricuspid or Non-systemic Atrioventricular Valve • 470 = Valve replacement, Tricuspid or Non-systemic Atrioventricular Valve

Example:

10 – PFO, Primary closure (0.1 / 1)

460 – Valvuloplasty, Tricuspid or Non-systemic Atrioventricular Valve (0.2 / 1)

180 – AVC (AVSD) repair, Intermediate (Transitional) (0.1 / 1)

Example:

10 – PFO, Primary closure (0.1 /

460 – Valvuloplasty, Tricuspid or

180 – AVC (AVSD) repair, Int

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
20	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
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

Analysis Update – Tie Breakers

Example:

10 – PFO, Primary closure (0.1 / 1)

460 – Valvuloplasty, Tricuspid or Non-systemic Atrioventricular Valve (0.2 / 1)*

190 – AVC (AVSD) repair, Partial, Incomplete (PAVSD) (0.1 / 1)

Example:

10 – PFO, Primary closure (0.1 /

~~460 – Valvuloplasty, Tricuspid or~~

190 – AVC (AVSD) repair, Partial,

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
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

Analysis Update - Summary

1. Combination codes – entered and derived
   - Code components as well as combination code
   - Analysis Overview, page 34

2. Tie breakers
   - If not determined by the participant, use Appendix C in reverse order
   - Review mismatches to ensure the tied component you want is selected

Open Discussion

Please use the Q&A Function.

We will answer as many questions as possible.

We encourage your feedback and want to hear from you!

Upcoming CHSD Webinars

Monthly Webinars

- 4/15/25 @ 12pmCT
  Data Manager Survey
- 5/20/25 @ 12pmCT

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THANK YOU FOR JOINING!