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Society of Thoracic Surgeons

Congenital Heart Surgery Database Monthly Webinar

June 17, 2025

Agenda

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

STS Updates

- June Training Manual posted

- 2025 Harvest Schedule
  - Spring 2025 data analysis has been completed
    - Report released June 2nd
    - Official Communication sent to Database Participants

  - Fall 2025 Harvest Close is scheduled for **September 26, 2025**
    - **Opt out is September 30, 2025**

STS Updates

- Calculation Updates Coming to Tables 18 and 19
  - Extubated in OR
    - Participant and STS Overall
  - Reintubated for Respiratory Failure
    - Participant and STS Overall
- Will be included in the July 12 IQVIA update release

Table 18 – Updated Calculation

Participant	Extubated in OR	Yes (N/%)	numerator = Number Eligible and (Intubate = 1, 3, or 4 AND ExtubInOR = 1) / denominator = (Number Eligible and Intubate = 1, 3, or 4)
Participant	Extubated in OR	No (N/%)	numerator = Number Eligible and (Intubate = 1, 3, or 4 AND ExtubInOR = 1) / denominator = (Number Eligible and Intubate = 1, 3, or 4)
Participant	Extubated in OR	Missing (N/	numerator = Number Eligible and (Intubate = 1, 3, or 4 AND ExtubInOR = 1) / denominator = (Number Eligible and Intubate = 1, 3, or 4)
STS Overall	Extubated in OR	Yes (N/%)	numerator = Number Eligible and (Intubate = 1, 3, or 4 AND ExtubInOR = 1) / denominator = (Number Eligible and Intubate = 1, 3, or 4)
STS Overall	Extubated in OR	No (N/%)	numerator = Number Eligible and (Intubate = 1, 3, or 4 AND ExtubInOR = 1) / denominator = (Number Eligible and Intubate = 1, 3, or 4)
STS Overall	Extubated in OR	Missing (N/	numerator = Number Eligible and (Intubate = 1, 3, or 4 AND ExtubInOR = 1) / denominator = (Number Eligible and Intubate = 1, 3, or 4)
Participant	Reintubated for Respiratory Failure	All Patients	numerator = Number Eligible and (Intubate = 1, 3, or 4) and Complication = 160 / denominator = Number Eligible and (Intubate = 1, 3, or 4)
Participant	Reintubated for Respiratory Failure	Extubated i	numerator = Number Eligible and (Intubate = 1, 3, or 4) and Complication = 160 and ExtubInOR = 1 / denominator = Number Eligible and (Intubate = 1, 3, or 4) and ExtubInOR = 1
Participant	Reintubated for Respiratory Failure	Extubated a	numerator = Number Eligible and (Intubate = 1, 3, or 4) and Complication = 160 and ExtubInOR = 2 / denominator = Number Eligible and (Intubate = 1, 3, or 4) and ExtubInOR = 2
STS Overall	Reintubated for Respiratory Failure	All Patients	numerator = Number Eligible and (Intubate = 1, 3, or 4) and Complication = 160 / denominator = Number Eligible and (Intubate = 1, 3, or 4)
STS Overall	Reintubated for Respiratory Failure	Extubated i	numerator = Number Eligible and (Intubate = 1, 3, or 4) and Complication = 160 and ExtubInOR = 1 / denominator = Number Eligible and (Intubate = 1, 3, or 4) and ExtubInOR = 1
STS Overall	Reintubated for Respiratory Failure	Extubated a	numerator = Number Eligible and (Intubate = 1, 3, or 4) and Complication = 160 and ExtubInOR = 2 / denominator = Number Eligible and (Intubate = 1, 3, or 4) and ExtubInOR = 2

Table 19 – Updated Calculation

Participant	Extubated in OR	Yes (N/%)	numerator = Number Eligible and (Intubate = 1, 3, or 4 AND ExtubInOR = 1) / denominator = (Number Eligible and Intubate = 1, 3, or 4)
Participant	Extubated in OR	No (N/%)	numerator = Number Eligible and (Intubate = 1, 3, or 4 AND ExtubInOR = 1) / denominator = (Number Eligible and Intubate = 1, 3, or 4)
Participant	Extubated in OR	Missing (N/	numerator = Number Eligible and (Intubate = 1, 3, or 4 AND ExtubInOR = 1) / denominator = (Number Eligible and Intubate = 1, 3, or 4)
STS Overall	Extubated in OR	Yes (N/%)	numerator = Number Eligible and (Intubate = 1, 3, or 4 AND ExtubInOR = 1) / denominator = (Number Eligible and Intubate = 1, 3, or 4)
STS Overall	Extubated in OR	No (N/%)	numerator = Number Eligible and (Intubate = 1, 3, or 4 AND ExtubInOR = 1) / denominator = (Number Eligible and Intubate = 1, 3, or 4)
STS Overall	Extubated in OR	Missing (N/	numerator = Number Eligible and (Intubate = 1, 3, or 4 AND ExtubInOR = 1) / denominator = (Number Eligible and Intubate = 1, 3, or 4)
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Participant	Reintubated for Respiratory Failure	Extubated i	numerator = Number Eligible and (Intubate = 1, 3, or 4) and Complication = 160 and ExtubInOR = 1 / denominator = Number Eligible and (Intubate = 1, 3, or 4) and ExtubInOR = 1
Participant	Reintubated for Respiratory Failure	Extubated a	numerator = Number Eligible and (Intubate = 1, 3, or 4) and Complication = 160 and ExtubInOR = 2 / denominator = Number Eligible and (Intubate = 1, 3, or 4) and ExtubInOR = 2
STS Overall	Reintubated for Respiratory Failure	All Patients	numerator = Number Eligible and (Intubate = 1, 3, or 4) and Complication = 160 / denominator = Number Eligible and (Intubate = 1, 3, or 4)
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STS Overall	Reintubated for Respiratory Failure	Extubated a	numerator = Number Eligible and (Intubate = 1, 3, or 4) and Complication = 160 and ExtubInOR = 2 / denominator = Number Eligible and (Intubate = 1, 3, or 4) and ExtubInOR = 2

AQO 2025 – NEW DATES!!

sts.org

- **CHSD and GTSD Sessions: Thursday, September 25th**
- ACSD Session: Friday, September 26th
- Intermacs and Pedimacs Session: Tuesday, September 23rd VIRTUAL
- Grand Hyatt San Antonio Riverwalk
- Both In Person (ACSD, CHSD, GTSD) and Virtual options (all databases) will be available

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.

Date(s)	Location	Audience
Sep 25—26, 2025	San Antonio, TX	Allied Health Data Manager

AQO Registration Now Open

Education Discussion Topics

- Review
  - Analysis changes
  - Risk Model
- TM Reminder
- FAQ Clarifications
  - COVID fields
  - Heart Failure, acute
  - Shunt, Reoperation

Review

Analysis Changes Spring 25

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DATA ANALYSES OF THE SOCIETY OF THORACIC SURGEONS
CONGENITAL HEART SURGERY DATABASE
Spring 2025 Analysis

Applicable analysis period

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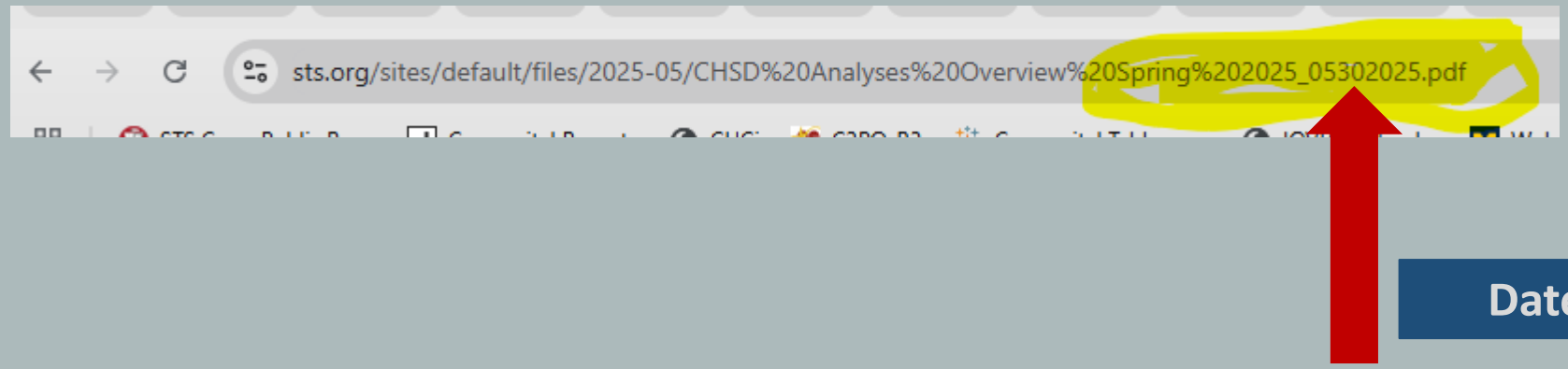
While these reports contain the Participant's individual data, they also contain confidential and proprietary aggregate data from the STS National Database and information derived therefrom ("STS Information"). Individual Participants may use their own data for internal quality assurance and monitoring of quality improvement processes. As a tool for service-building, Participants may use their data to participate in certain approved activities for purposes of promotion and marketing of the specialty program.

The STS aggregate Information contained in this report may not be further used or disclosed without the Society's prior express written permission, unless and until the relevant STS Information has been released to the public by the Society.

Analysis Changes Spring 25



Analysis Changes Spring 25

Rules for Identifying Episodes of Care

The unit of analysis for mortality analyses in the feedback report is an episode of care.

For 3.41, and 6.23.2 an episode of care will consist of all operation records with the same database discharge date.

If an episode of care does not contain at least one Cardiovascular Surgical Operation as defined above, then this episode of care will not be included in mortality analyses and will be ignored in the report logic described below. Thus, the term "episode of care" will refer to an episode of care with at least one Cardiovascular Surgical Operation.

If a patient has two overlapping episodes of care, as defined by two index operations occurring within 30 days of one another, then the first index operation will be analyzed. Subsequent index operations will be ignored in the report logic as described below.

For v3.41 and 6.23.2 records if a record is missing a date of database discharge but has a database discharge status, then the record is considered to be its own episode of care. If the episode meets the episode-level definition of Operative Mortality, as defined below, the episode will be included in the analysis and counted as an Operative Mortality. Otherwise, the episode will be included if each operation record of the episode has non-missing data for fields used in the calculation of episode-level Operative Mortality, as outlined below. Otherwise, the episode will have missing data for episode-level Operative Mortality and will be excluded on the basis of missing data. **Note**: if the reason for missing Date of Database Discharge is because the episode is ongoing, then logic dictates that these records will have missing values for Mortality Status at Database Discharge, and the records will be excluded on the basis of missing mortality data.

Analysis Changes Spring 25

Determination of the Primary Procedure of an Operation and Classification of Multiple-Procedure Operations

The guiding principle for determining the primary procedure for a given operation is to select the procedure with the highest STAT Mortality Score.

Analyses Overview - 4

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.**

If there is a tie for highest STAT Mortality Score the procedure indicated as the primary by the participant will become the primary procedure.

If an operation does not have any procedures with a STAT Mortality Score (Appendix C), then:

1. The primary procedure designated by the Participant is used.
2. If no procedure was selected as primary procedure by the Participant; then 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 are outlined in the CHSD Training Manual (Seq. No 1355 - PrimaryProcedure) located on the STS Website (STS CHSD Data Collection Resources). Updated rules to assign primary procedure were introduced with the Spring 2025 Analysis.

Changes over time

DRAFT

Version	Go-Live date
v 3.0	1-Jan-10
v 3.22	1-Jan-14
v 3.3	1-Jan-16
v 3.41	1-Jan-19
v 6.23	1-Jul-23

Analytical Updates	First Analysis	Surgical Dates included
STAT 2020 (Appendix C)	Spring 22	1/1/2018 - 12/31/2021
Overlapping EOC (Page 3)	Spring 25	1/1/2021 - 12/31/2024
New Primary Procedure Rules	Spring 25	1/1/2021 - 12/31/2024

Risk Model

Risk Model

CHSD Risk Model Specifications

Current case mix adjustment is based on the 2019 update of the STS Congenital Heart Surgery Database Risk Model. The updated model adjusts for the same factors as the 2014 model but adds a more detailed adjustment for non-cardiac congenital abnormalities, chromosomal abnormalities, and syndromes. The current model adjusts for the following variables:

Variable
Age [a]
Primary procedure [b]
Weight (neonates and infants) at time of surgery
Prior cardiothoracic operation
Prematurity (neonates and infants)
Preoperative Factors
• Preoperative/Preprocedural mechanical circulatory support (IABP, VAD, ECMO, or CPS) [c]
• Shock, Persistent at time of surgery
• Mechanical ventilation to treat cardiorespiratory failure
• Renal failure requiring dialysis and/or Renal dysfunction
• Preoperative neurological deficit
• Any other preoperative factor (except 'Other preoperative factors' with code value = 777) [d]

Risk Model

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Preoperative Factors
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• Mechanical ventilation to treat cardiorespiratory failure
• Renal failure requiring dialysis and/or Renal dysfunction
• Preoperative neurological deficit
• Any other preoperative factor (except 'Other preoperative factors' with code value = 777) [d]

Risk Model

- (220) Preoperative/Preprocedural mechanical circulatory support (IABP, VAD, ECMO, or CPS)
- (230) Shock, Persistent at time of surgery
- (470) Invasive Mechanical ventilation to treat cardiorespiratory failure
- (460) or (450) Renal failure requiring dialysis and/or Renal dysfunction
- (400) or (440) Preoperative neurological deficit

Risk Model

- (220) Preoperative/Preprocedural mechanical circulatory support (IABP, VAD, ECMO, or CPS)
- (230) Shock, Persistent at time of surgery
- (470) Invasive Mechanical ventilation to treat cardiorespiratory failure
- (460) or (450) Renal failure requiring dialysis and/or Renal dysfunction
- (400) or (440) Preoperative neurological deficit **and/or Stroke, CVA, or Intracranial hemorrhage > Grade 2 within 48 hours prior to surgery**

Risk Model

- (220) Preoperative/Preprocedural mechanical circulatory support (IABP, VAD, ECMO, or CPS)
- (230) Shock, Persistent at time of surgery
- (470) Invasive Mechanical ventilation to treat cardiorespiratory failure
- (460) or (450) Renal failure requiring dialysis and/or Renal dysfunction
- (400) or (440) Preoperative neurological deficit and/or Stroke, CVA, or Intracranial hemorrhage > Grade 2 within 48 hours prior to surgery
- Any other preoperative factor (except 'Other preoperative factors' with code 777)

Risk Model

- Any other preoperative factor (except 'Other preoperative factors' with code 777)

CHSD Risk Model Specifications

Current case mix adjustment is based on the 2019 update of the STS Congenital Heart Surgery Database Risk Model. The updated model adjusts for the same factors as the 2014 model but adds a more detailed adjustment for non-cardiac congenital abnormalities, chromosomal abnormalities, and syndromes. The current model adjusts for the following variables:

Risk Model

Any other preoperative factor (except 'Other preoperative factors' with code 777)

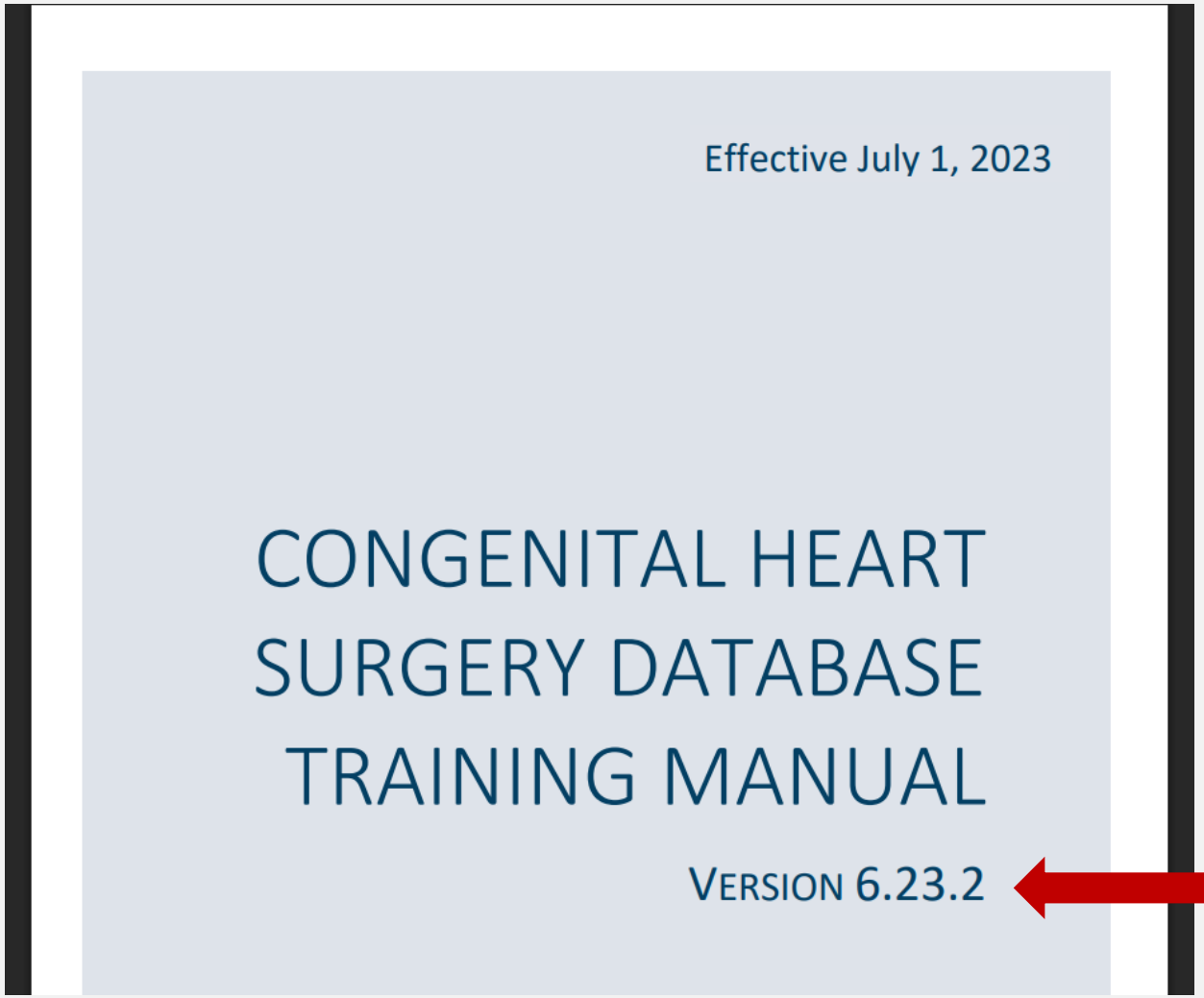
(200) Cardio-pulmonary resuscitation
(210) Preoperative complete AV block
(240) Shock, Resolved at time of surgery
(250) Diabetes mellitus, Insulin dependent
(260) Diabetes mellitus, Non-insulin dependent
(270) Hypothyroidism
(280) Currently taking steroids as treatment for adrenal insufficiency
(290) Currently taking steroids for any reason other than treatment of adrenal insufficiency
(295) Colostomy present

(300) Enterostomy of small intestine present
(305) Esophagostomy present
(307) Gastrostomy present
(310) Hepatic dysfunction
(320) Necrotizing entero-colitis, Treated medically
(330) Necrotizing entero-colitis, Treated surgically
(340) Coagulation disorder, Hypercoagulable state
(350) Coagulation disorder, Hypocoagulable state not secondary to medication (intrinsic hypocoagulable state)

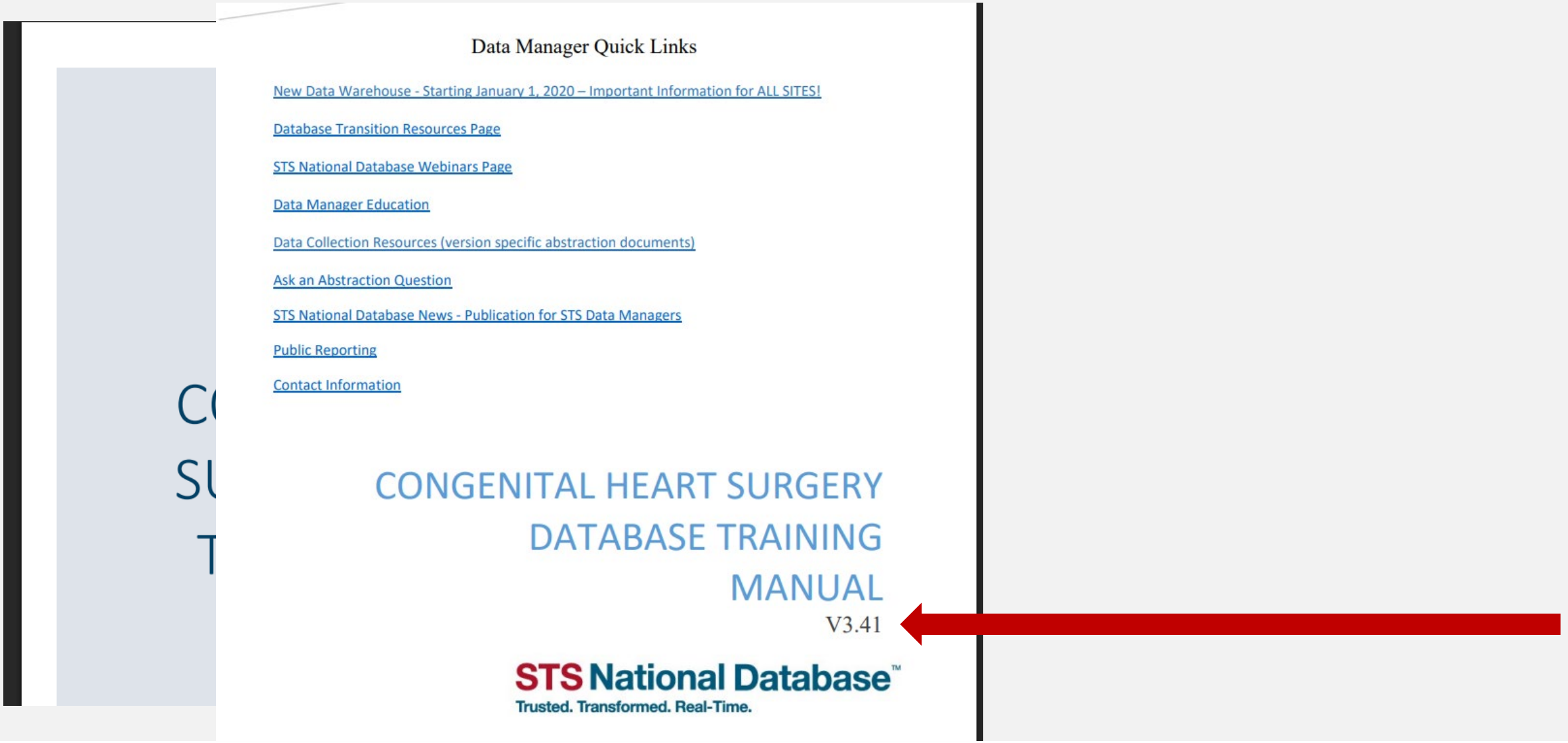
(360) Coagulation disorder, Hypocoagulable state secondary to medication
(370) Endocarditis
(380) Sepsis
(390) Sepsis with positive blood culture
(410) Seizure during lifetime
(420) Seizure within 48 hours prior to surgery
(430) Stroke, CVA, or Intracranial hemorrhage > Grade 2 during lifetime
(480) Respiratory Syncytial Virus
(490) Single lung
(500) Tracheostomy present

Reminders

Training Manual



Training Manual



Data Manager Quick Links

New Data Warehouse - Starting January 1, 2020 – Important Information for ALL SITES!

Database Transition Resources Page

STS National Database Webinars Page

Data Manager Education

Data Collection Resources (version specific abstraction documents)

Ask an Abstraction Question

STS National Database News - Publication for STS Data Managers

Public Reporting

Contact Information

CONGENITAL HEART SURGERY
DATABASE TRAINING
MANUAL
V3.41

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FAQ Clarifications

COVID Fields

Long Name: Temporary Coded Field

SeqNo:	560
Short Name:	TempCode
Database Table Name:	Operations
Data Source:	User
Format:	Text (categorical values specified by STS)
Definition:	This is a temporary field that shou collection until expressly instructe As of release of v6.22.1, this is cu COVID testing.

Intent/Clarification:

Please complete this field on patients entered in the database starting April 1, 2020. Sites have the option to retroactively collect this field back to January 1, 2020, if they choose to do so.

Positive antibody testing is not captured. There are many tests for different types of coronaviruses and STS is only collecting the one causing Covid-19 which is SARS-CoV-2.

Note: Beginning on January 1, 2022, the STS National Database will begin to include all COVID-19 positive patients undergoing surgery in risk-adjusted analyses and reporting. This will not be applied retroactively to previously excluded patients. The impact of COVID-19 on operative risk will continue to be an active area of investigation in the database, and future policy may be implemented as our understanding evolves and the data warrant. Please continue collecting COVID data until further direction is available.

Continue to collect the laboratory confirmed diagnosis of Covid-19 on the index operation only of the episode of care; optional to collect on the other operations (update May-25).

Heart Failure

670	Heart failure	Defined: Heart failure is described as unusual dyspnea on light exertion, recurrent dyspnea occurring in the supine position, fluid retention; or the description of rales, jugular venous distension, pulmonary edema on physical exam, or pulmonary edema on chest x-ray presumed to be cardiac dysfunction. Timeframe: anytime between birth and OR entry date/time. Code this factor: if the patient has a documented history of heart failure, including right or left heart failure, prior to OR entry date/time. A diagnosis of heart failure must be documented in the medical record to code heart failure. Signs and symptoms of heart failure alone are not sufficient to code this factor (update Oct-23).

Heart Failure

Long Name: Heart Failure Timing

SeqNo:	765
Short Name:	HeartFailTmg
Database Table Name:	Operations
Data Source:	User
Format:	Text (categorical values specified by STS)
Definition:	Indicate whether heart failure is acute, chronic or both (acute on chronic)

ParentLongName:	Preoperative Factor - Multi-Select
ParentShortName:	PreopFactorMulti
ParentHarvestCodes:	contains(670)
ParentValue:	Contains ("Heart failure")

Harvest Codes:

Code:	Value:
1	Acute
2	Chronic
3	Both

Heart Failure

Harvest Codes:

Code:	Value:
1	Acute
2	Chronic
3	Both

Description:

Acute heart failure is the rapid onset of symptoms and signs of heart failure and may occur with or without previous cardiac disease occurring within 2 weeks of surgery. Acute decompensated heart failure is a sudden worsening of the signs and symptoms of heart failure, which typically includes difficulty breathing (dyspnea), leg or feet swelling, and fatigue.

To code acute heart failure, the patient must meet both of the following criteria:

1. a current clinical diagnosis of heart failure documented in the medical record during this episode of care prior to OR entry date/time

and

2. is taking at least one medication (other than diuretics alone or digoxin alone) specifically to address heart failure that would not have otherwise been used in this patient within the 48-hours prior to OR entry date/time (update May-25).

Scenario 1: Preop Factor Heart Failure

Patient receiving home lasix admitted for a documented acute exacerbation of chronic heart failure. The lasix dose is increased, and the planned surgery date is moved up by 6-weeks. Does the patient meet the criteria for preop factor (670) Heart failure?

- ☐ Yes
- ☐ No

Scenario 1: Preop Factor Heart Failure

Patient receiving home lasix admitted for a documented acute exacerbation of chronic heart failure. The lasix dose is increased, and the planned surgery date is moved up by 6-weeks. Does the patient meet the criteria for preop factor (670) Heart failure?

- ☑ Yes
- ☐ No

670	Heart failure	Timeframe: anytime between birth and OR entry date/time. Code this factor: if the patient has a documented history of heart failure, including right or left heart failure, prior to OR entry date/time. A diagnosis of heart failure must be documented in the medical record to code heart failure.

Scenario 1: Preop Factor Heart Failure

Patient receiving home lasix admitted for a documented acute exacerbation of chronic heart failure. The lasix dose is increased, and the planned surgery date is moved up by 6-weeks. What is the correct (765) Heart Failure Timing?

- ☐ Acute
- ☐ Chronic
- ☐ Both
- ☐ None of the above – leave blank

Scenario 1: Preop Factor Heart Failure

Patient receiving home lasix admitted for a documented acute exacerbation of chronic heart failure. The lasix dose is increased, and the planned surgery date is moved up by 6-weeks. What is the correct (765) Heart Failure Timing?

- ☐ Acute
- ☑ Chronic
- ☐ Both
- ☐ None of the above – leave blank

Heart Failure Timing

To code acute heart failure, **both** must be met:

- a current clinical diagnosis of acute heart failure documented in the medical record during this episode of care prior to OR entry date/time

and

- is taking at least one medication (other than diuretics alone or digoxin alone) specifically to address heart failure that would not have otherwise been used in this patient within the 48-hours prior to OR entry date/time

Heart Failure Timing

Chronic heart failure develops gradually overtime with symptoms of shortness or breath, lower extremity swelling and fatigue without an acute exacerbation within the 2 weeks prior to admission

As currently defined, patient does not meet criteria for acute heart failure (also doesn't meet criteria for "both")

Scenario 2: Preop Factor Heart Failure

Newborn transferred to surgical center on DOL 0. Arrived intubated with epinephrine & milrinone infusions with documented diagnoses cardiac dysfunction and acute systolic & diastolic heart failure. Following immediate bedside balloon atrial septostomy, inotropes discontinued. Diuretic therapy initiated and continued. On DOL 9, patient to OR for palliation. What is the correct (765) Heart Failure Timing?

- ☐ Acute
- ☐ Chronic
- ☐ Both
- ☐ None of the above – leave blank

Scenario 2: Preop Factor Heart Failure

Newborn transferred to surgical center on DOL 0. Arrived intubated with epinephrine & milrinone infusions with documented diagnoses cardiac dysfunction and acute systolic & diastolic heart failure. Following immediate bedside balloon atrial septostomy, inotropes discontinued. Diuretic therapy initiated and continued. On DOL 9, patient to OR for palliation. What is the correct (765) Heart Failure Timing?

- ☐ Acute
- ☐ Chronic
- ☐ Both
- ☑ None of the above – leave blank

Heart Failure Timing

To code acute heart failure, **both** must be met:

- a current clinical diagnosis of acute heart failure documented in the medical record during this episode of care prior to OR entry date/time

and

- is taking at least one medication (other than diuretics alone or digoxin alone) specifically to address heart failure that would not have otherwise been used in this patient within the 48-hours prior to OR entry date/time

Heart Failure Timing

Chronic heart failure develops gradually overtime with symptoms of shortness or breath, lower extremity swelling and fatigue without an acute exacerbation within the 2 weeks prior to admission

As currently defined,
patient does not meet criteria for
acute or chronic heart failure

Shunt, Reoperation

2095	Shunt, Reoperation	Revision ~~or replacement~~ (update May-25) of a previously created shunt. Coding Notes: Includes placement or removal of clips on previously created shunts (i.e., clip placed on a Sano shunt). Includes the banding of a previously placed shunt (update Mar-25). In the event an existing shunt is taken down and replaced with a new shunt, code the specific type of shunt placed and procedure (1630) Shunt, Ligation and takedown (update May-25).

Scenario 3: Shunt Operations

Patient with an existing modified Blalock-Taussig shunt (mBTS) admitted with shunt failure. Taken to OR for placement of a new mBTS with removal of the existing shunt. What is the correct primary procedure?

- ☐ (2095) Shunt, Reoperation
- ☐ (1630) Shunt, Ligation and takedown
- ☐ (1590) Shunt, Systemic to pulmonary, Modified Blalock- Taussig Shunt (MBTS)

Scenario 3: Shunt Operations

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- ☐ (1630) Shunt, Ligation and takedown
- ☑ (1590) Shunt, Systemic to pulmonary, Modified Blalock- Taussig Shunt (MBTS)

Shunt Operations

2095	Shunt, Reoperation	Revision ~~or replacement~~ (update May-25) of a previously created shunt. Coding Notes: Includes placement or removal of clips on previously created shunts (i.e., clip placed on a Sano shunt). Includes the banding of a previously placed shunt (update Mar-25). In the event an existing shunt is taken down and replaced with a new shunt, code the specific type of shunt placed and procedure (1630) Shunt, Ligation and takedown (update May-25).

Scenario 4: Shunt Operations

A few days following placement of a Sano shunt, the patient requires banding of the shunt due to excess pulmonary blood flow. What is the correct primary procedure?

- ☐ (2095) Shunt, Reoperation
- ☐ (3680) RV to PA Shunt (e.g., Sano Shunt – valved or non-valved or palliative RV- PA non-valved conduit to augment pulmonary blood flow)
- ☐ (2010) Cardiac procedure, Other

Scenario 4: Shunt Operations

A few days following placement of a Sano shunt, the patient requires banding of the shunt due to excess pulmonary blood flow. What is the correct primary procedure?

- ☑ (2095) Shunt, Reoperation
- ☐ (3680) RV to PA Shunt (e.g., Sano Shunt – valved or non-valved or palliative RV- PA non-valved conduit to augment pulmonary blood flow)
- ☐ (2010) Cardiac procedure, Other

Shunt Operations

3680	RV to PA Shunt (e.g., Sano Shunt – valved or non-valved (update Dec-24) or palliative RV- PA non-valved conduit to augment pulmonary blood flow)

Coding Notes:

Do not use this code for valved RV to PA conduits.

Use this code for Sano Shunts whether valved or non-valved or palliative RV-PA non-valved conduits to augment pulmonary blood flow (update May-25).

In the event the RV to PA Shunt is banded during the same operation, code the banding of the shunt as procedure (2010) Cardiac procedure, Other. In the event the shunt is banded during a subsequent/separate operation, code procedure (2095) Shunt, Reoperation (update Mar-25).

Scenario 5: Shunt Operations

Following placement of a Sano shunt, the postop TEE in the OR revealed excess pulmonary blood flow. The patient went back on bypass and the Sano shunt was banded. What is the correct way to code the banding of the shunt?

- ☐ (2095) Shunt, Reoperation
- ☐ (3680) RV to PA Shunt (e.g., Sano Shunt – valved or non-valved or palliative RV- PA non-valved conduit to augment pulmonary blood flow)
- ☐ (2010) Cardiac procedure, Other

Scenario 5: Shunt Operations

Following placement of a Sano shunt, the postop TEE in the OR revealed excess pulmonary blood flow. The patient went back on bypass and the Sano shunt was banded. What is the correct way to code the banding of the shunt?

- ☐ (2095) Shunt, Reoperation
- ☐ (3680) RV to PA Shunt (e.g., Sano Shunt – valved or non-valved or palliative RV- PA non-valved conduit to augment pulmonary blood flow)
- ☑ (2010) Cardiac procedure, Other

Shunt Operations

3680	RV to PA Shunt (e.g., Sano Shunt – valved or non-valved (update Dec-24) or palliative RV- PA non-valved conduit to augment pulmonary blood flow)

Coding Notes:

Do not use this code for valved RV to PA conduits.

Use this code for Sano Shunts whether valved or non-valved or palliative RV-PA non-valved conduits to augment pulmonary blood flow (update May-25).

In the event the RV to PA Shunt is banded during the same operation, code the banding of the shunt as procedure (2010) Cardiac procedure, Other. In the event the shunt is banded during a subsequent/separate operation, code procedure (2095) Shunt, Reoperation (update Mar-25).

Scenario 6: Reoperations

Patient decompensated in OR following arterial switch operation (ASO). Transferred to cath lab where imaging revealed a kinked coronary artery. Transferred back to the OR for coronary artery repair. How is this event best captured?

- ☐ Enter the coronary artery repair as part of the ASO as the patient did not return to the CVICU yet
- ☐ Enter the coronary artery repair as a second/separate operation
- ☐ Include the cath lab imaging as an Unplanned interventional cardiac catheterization procedure

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Scenario 6: Reoperations Explained

- ☐ Enter the coronary artery repair as part of the ASO as the patient did not return to the CVICU yet – *No, the case ends when the patient leaves the OR*

- ☐ Include the cath lab imaging as an Unplanned interventional cardiac catheterization procedure – *No, the cath was diagnostic only; no procedures performed*

Reoperations Explained Cont.

Long Name: Time Patient Exited the OR

SeqNo:	1970
Short Name:	ORExitT
Database Table Name:	Operations
Data Source:	User
Format:	Time - hh:mm (24-hour clock)
Definition:	Indicate to the nearest minute (using 24-hour clock) the time the patient exits the operating room. If the procedure was performed in a location other than the OR, record the time when the sterile field was taken down.

Intent/Clarification:

TM Clarification:

The time the patient physically leaves the OR (or surgical location) is the end of the case/procedure (update Jun-25)

Scenario 6: Reoperations

Patient decompensated in OR following arterial switch operation (ASO). Transferred to cath lab where imaging revealed a kinked coronary artery. Transferred back to the OR for coronary artery repair. Is this an unplanned cardiac reoperation?

- ☐ Yes
- ☐ No

Scenario 6: Reoperations

Patient decompensated in OR following arterial switch operation (ASO). Transferred to cath lab where imaging revealed a kinked coronary artery. Transferred back to the OR for coronary artery repair. Is this an unplanned cardiac reoperation?

- ☑ Yes – the initial case ended, the kinked coronary artery was not known in the OR, and the repair was not planned during the initial surgical planning
- ☐ No

Summary

In summary:

- have the training manual open at all times
- pay attention to monthly updates
- submit a clinical question when in doubt

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

- 7/15/25 @ 12pmCT
  - IQVIA Report Review
- 8/19/25 @ 12pmCT

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