STS National Database™
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Society of Thoracic Surgeons

Congenital Heart Surgery Database
Monthly Webinar

February 20, 2024

Agenda

- Welcome and Introduction

- STS Update

- STS Data Manager Education (Chasity Wellnitz and Leslie Wacker, CHSD Consultants)

- Q&A

STS Updates

- January Training Manual posted
  - Next TM update will be March

- CHSD Public Reporting
  - Next update is scheduled to take place in late Q1 2024 and will include results from the Fall 23 analysis.

- Spring 24 Harvest is underway
  - Surgery dates 1/1/2020 – 12/31/2023
  - Harvest close is March 22 @ 11:59pm Eastern

IQVIA Updates

- What the Fontan? Primary Procure Mismatch Report Update
  - In a previous webinar we informed sites to changes for Fontan revision or conversion procedures.
  - The update to the Primary Procedure Mismatch report will be rolled out with the March 9th release
  - Refer to the CHSD TM for clarification on coding

- Missing Variable Report
  - Participant does NOT participate in Anesthesia Component
  - Anesthesia data being reported as Missing
  - This fix will be included in the March 9th release

- For more detailed information please review the August 15th webinar recording

2024 Harvest Schedule

Term	Harvest Submission Window Close	Opt-Out Date	Includes Procedures Performed Through:	Report Posting
Spring 2024	3/22/2024	3/26/2024	12/31/2023	Summer 2024
Fall 2024	9/27/2024	10/1/2024	6/30/2024	Winter 2024

Data Submission Open is continuous for all harvest terms. Data Submission Close occurs at 11:59 p.m. Eastern on the date listed.

2024 AQO: A Data Managers Meeting

- Join us in Music City: Nashville, Tennessee
- September 11 - 13

6.23.2 Data Manager Education

February 20, 2024

Discussion Topics

AQO Topic Poll

Updates /Clarifications

- Mortality date
- Acute renal failure
- Noncardiac reoperation
- Reintubation
- Episode of care

AQO Topic Poll

In the chat, please type topics of interest for AQO including format suggestions.

Mortality Date

(SeqNo 5005) Mortality Date (MtDate)

Current Definition:

- enter the exact date of death

- if unknown, enter the date the program/surgeon was notified of death

Concern the notification date could be a long time following the actual date of death not allowing for accurate longitudinal follow up

Mortality Date – TM Update

(SeqNo 5005) Mortality Date (MtDate)

Use the exact date of death if possible. In the event the exact date is not available, ~~e.g., another facility notifies the surgeon a former patient died but no exact date was given, enter the date the surgeon was notified of the death.~~ use the following guidance (update Mar-24):

- If month and year are known, enter the last day of that period: MM/last day of the month/YYYY (MM/28-29-30-31/YYYY). For example, if the patient died in January of 2022, enter 01/31/2022 as the 31st is the last day of that month (period).

- If only year is known, enter the last day of the year, 12/31/YYYY.

- If year or year and month are unknown, leave the mortality date blank.

- Do not enter a future date.

Mortality Date – Scenario #1

*In 2022, a patient discharged home on postop day 40.
When following up on mortality status at 365-days, the PCP states the patient expired sometime in 2023.*

What should be entered as the mortality date?

☐ 06/01/2023

☐ 12/31/2023

☐ The date the data manager called the PCP

Mortality Date – Scenario #1

In 2022, a patient discharged home on postop day 40.
When following up on mortality status at 365-days, the PCP states the patient expired sometime in 2023.

What should be entered as the mortality date?

- ☐ 06/01/2023
- ✔ 12/31/2023
- ☐ The date the dat

> – If month and year are known, enter the last day of that period: MM/last day of the month/YYYY (MM/28-29-30-31/YYYY). For example, if the patient died in January of 2022, enter 01/31/2022 as the 31st is the last day of that month (period).
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>
> – If year or year and month are unknown, leave the mortality date blank.
>
> – Do not enter a future date.

Mortality Date – Scenario #2

A patient discharged home on postop day 40.
When following up on mortality status at 365-days, the PCP states the patient expired but they are not sure when.

How should mortality date and mortality status at last follow up be entered?

☐ Leave mortality date and mortality status blank

☐ Enter mortality date 12/31/2022 as it is the last day of the year

☐ Enter mortality status at last follow up as dead and leave mortality date blank

Mortality Date – Scenario #2

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When following up on mortality status at 365-days, the PCP states the patient expired but they are not sure when.

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- ☐ Leave mortality date and mortality status blank
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- ☑ Enter mortality status at last follow up as dead and leave mortality date blank

Postoperative Event – Acute Renal Failure

Postop Event (570) Acute Renal Failure

Current definition does not discriminate between acute renal failure and acute kidney injury

Defined: acute renal failure is defined as *at least one* of the following:

- new requirement for dialysis (peritoneal and/or hemodialysis) or hemofiltration for acute renal failure

and/or

- if < 6575-days (<18-years) of age, new onset oliguria with sustained urine output < 0.5 ml/kg/hr for 24-hours and/or a rise in serum creatinine > 1.5 times the upper limits of normal for age (or twice the most recent preoperative value if available)

and/or

- if ≥ 6575-days (≥ 18-years) of age, a 3x increase in serum creatinine level from the preoperative value, and/or a serum creatinine level ≥ 4.0 mg/dl with at least a 0.5 mg/dl rise from the preoperative value.

Postoperative Event – Acute Renal Failure

Postop Event (570) Acute Renal Failure – TM Update

Patients <18-years of age with new diagnostic criteria

Defined: acute renal failure is defined as *at least one* of the following:

- new requirement for dialysis (peritoneal and/or hemodialysis) or hemofiltration for acute renal failure

  and/or

- if < 6575-days (<18-years) of age, a new clinical diagnosis of acute renal failure in addition to *at least one* of the following (update Mar-24):

  - new onset oliguria with sustained urine output < 0.5 ml/kg/hr for 24-hours

  - a rise in serum creatinine > 1.5 times the upper limits of normal for age (or twice the most recent preoperative value if available)

  and/or

- if ≥ 6575-days (≥ 18-years) of age, a 3x increase in serum creatinine level from the preoperative value, and/or a serum creatinine level ≥ 4.0 mg/dl with at least a 0.5 mg/dl rise from the preoperative value.

Postop Event (26): Non-cardiac Reoperation

- Includes any additional non-cardiac operation

- Planned or unplanned

Question regarding repositioning/replacement/manipulation of existing gastrostomy tubes

Postop Event (26): Non-cardiac Reoperation – TM Updates

Includes the following procedures whether planned or unplanned regardless of the procedure location or individual performing the procedure (e.g., proceduralist/surgeon etc.) (update Mar-24):

Existing Gastrostomy/Enteral Tube Procedure Information:
Do not code this event if a patient with an existing gastrostomy/enteral tube undergoes conversion from one tube type to another (e.g., a change from a gastrostomy tube to a MIC-KEY button through the same site in the abdominal wall) or feeding location from pre to post pyloric (e.g., a change from a gastrostomy tube to a gastrojejunostomy tube).

Do code this postoperative event if the patient with an existing gastrostomy/enteral tube received a new tube in a new site in the abdominal wall (update Mar-24).

Specific information updated for procedures on existing enteral tubes

Non-cardiac Operation Scenario #1

Post-cardiac surgery, a patient with an existing GT undergoes conversion to a GJ tube in IR. The patient develops abdominal distention and returns to IR to change the GJ tube out through the existing stoma due to physical obstruction.

Should postoperative event Non-cardiac operation be coded?

☐ No

☐ Yes, the patient underwent an unplanned reoperation

☐ Not sure, need to ask my cardiac surgeon for more info

Non-cardiac Operation Scenario #1

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Should postoperative event Non-cardiac operation be coded?

☑ No – existing tube conversion and not a new site in the abdominal wall

☐ Yes, the patient underwent an unplanned reoperation

☐ Not sure, need to ask my cardiac surgeon for more info

Reintubation - Clarified

Postoperative event (160) Postoperative/Postprocedural respiratory insufficiency requiring reintubation -

This field is not intended to collect the need for prolonged mechanical ventilation but is capturing the need for reintubation for respiratory insufficiency or failure.

In the event a patient is electively intubated for an additional procedure and requires prolonged (> 7 days) ventilation, code postoperative event (150) Postoperative/Postprocedural respiratory insufficiency requiring mechanical invasive or non-invasive ventilatory support > 7 days.

Does not say to also code reintubation

Reintubation – Scenario #1

Postoperatively, a patient requires a diagnostic cath and is intubated in the cath lab for the procedure. The patient returns to the CVICU and is unable to wean from the ventilator and ultimately requires tracheostomy.

Was this patient reintubated for respiratory distress or failure?

- ☐ Yes, in the cath lab for the diagnostic procedure

- ☐ No, the patient only received prolonged ventilation

- ☐ Yes, because the patient was not able to wean appropriately from the ventilator

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- ☐ Yes, in the cath lab for the diagnostic procedure
- ☑ No, the patient received prolonged ventilation
- ☐ Yes, because the patient was not able to wean appropriately from the ventilator

Confusing Cases Scenarios

Patient admits from OSH after a long post operative course following their Fontan for a transplant evaluation, and is ultimately listed.

Unfortunately, the patient further decompensates and family withdraws care.

Confusing Cases Scenarios

Which hospital captures the mortality?

☐ The first hospital only

☐ The second hospital only

☐ Both, but only the first has the mortality in analysis because they did the index op (Fontan)

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☐ Both, but only the first has the mortality in analysis because they did the index op (Fontan)

Why…?

☑ The first hospital only –

The second hospital has not done an operation; therefore has no reportable case and no where to "capture" the mortality (for STS).

Why...?

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☐ The second hospital only –

   The second hospital has not done an operation; therefore has no reportable case and no where to "capture" the mortality (for STS).

☐ Both, but only the first has the mortality in analysis because they did the index op (Fontan)

   It is important to understand that IQVIA and/or STS do not recognize patients across hospitals. It's not possible to "assign" the mortality to only the hospital who did the index operation.

Confusing Cases Scenarios

Patient admits from OSH after a long post operative course following their Fontan for a transplant evaluation.

On POD100 (from the Fontan), the patient receives a heart transplant. Postoperatively, the patient suffers arrhythmias treated with medication and temporary pacing before ultimately receiving a permanent pacemaker.

Confusing Cases Scenarios

Which postoperative events should the transferring hospital capture?

☐ None, the EOC ends with the transfer to the new hospital

☐ The heart transplant as "unplanned cardiac reoperation"

☐ All postoperative events through database discharge date

☐ "Unplanned cardiac reoperation" and "Arrhythmia necessitating pacemaker, Permanent pacemaker"

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Why…?

☐ None, the EOC ends with the transfer to the new hospital –

The EOC does not end with transfer to another hospital. EOC ends with death, discharge to home, or 183 consecutive postoperative days in an acute care center.

Why…?

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☐ The heart transplant as "unplanned cardiac reoperation" –

Yes, but also…

Why…?

☐ None, the EOC ends with the transfer to the new hospital –

 The EOC does not end with transfer to another hospital. EOC ends with death, discharge to home, or 183 consecutive postoperative days in an acute care center.

☐ The heart transplant as "unplanned cardiac reoperation" –

 Yes, but also…

☐ All postoperative events through database discharge date –

 No, not **all** postoperative events are captured through the Episode of Care.

Why…?

☐ None, the EOC ends with the transfer to the new hospital –

   The EOC does not end with transfer to another hospital. EOC ends with death, discharge to home, or 183 consecutive postoperative days in an acute care center.

☐ The heart transplant as "unplanned cardiac reoperation" –

    Yes, but also…

☐ All postoperative events through database discharge date –

   No, not **all** postoperative events are captured through the Episode of Care.

☑ "Unplanned cardiac reoperation" and "Arrhythmia necessitating pacemaker, Permanent pacemaker" –

   Yes, these two postoperative events are the only two the patient has with the "major event timeline" i.e., collected through EOC rather than 30 days postop.

Confusing Cases Scenarios

Patient admits from OSH after a long post operative course following their Fontan for a transplant evaluation.

On POD100 (from the Fontan), the patient receives a heart transplant. Postoperatively, the patient suffers arrhythmias treated with medication and temporary pacing before ultimately receiving a permanent pacemaker.

After a complicated postoperative period and extensive life saving efforts, the patient expires.

Confusing Cases Scenarios

Which hospital captures the mortality?

☐ The first hospital only

☐ The second hospital only

☐ Both hospitals

Confusing Cases Scenarios

Which hospital captures the mortality?

- ☐ The first hospital only
- ☐ The second hospital only
- ☑ Both hospitals

Why…?

☐ The first hospital only

☐ The second hospital only

☑ Both hospitals –

Both hospitals have reportable events to STS and both hospitals have index operations, meaning they both have mortalities. This is an example of the rare occurrence of patients "dying twice" in the database.

Confusing Cases Scenarios

Patient arrives to your ED from home following their Fontan procedure on POD 15 where they are emergently cannulated to ECMO by cardiac surgery and transferred to the ICU. The patient requires a Fontan revision later the same day, but unfortunately expires the next day.

Confusing Cases Scenarios

On which event do you capture operative mortality?

☐ The first operation: Fontan, TCPC, Lateral Tunnel, Fenestrated

☐ The second operation: Fontan revision or conversion (Re-do Fontan)

☐ Both Fontan operations

☐ All operations

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Why...?

Long Name: Mortality - Operative Death

SeqNo:	4985
Short Name:	MtOpD
Database Table Name:	Operations
Data Source:	User
Format:	Text (categorical values specified by STS)
Definition:	Operative Mortality includes: (1) ==all deaths, regardless of cause, occurring during the hospitalization in which the operation was performed==, even if after 30 days (including patients transferred to other acute care facilities); and (2) all deaths, regardless of cause, occurring after discharge from the hospital, but before the end of the thirtieth postoperative day.

Why...?

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Why…?

Intent/Clarification:

This field should be completed accurately for all procedures performed (index and non-index) including all operation types regardless of whether the case will be analyzed or included in a specific analysis table.

This field cannot be completed until the patient's episode of care has ended.

Why…?

☐ The first operation: Fontan, TCPC, Lateral Tunnel, Fenestrated

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☐ Both Fontan operations

☑ All operations

EXTRA CREDIT

Which event is *analyzed* as a mortality?

☐ The first operation: Fontan, TCPC, Lateral Tunnel, Fenestrated

☐ The second operation: Fontan revision or conversion (Re-do Fontan)

☐ Both Fontan operations

☐ All operations

EXTRA CREDIT

Which event is *analyzed* as a mortality?

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☐ The second operation: Fontan revision or conversion (Re-do Fontan)

☐ Both Fontan operations

☐ All operations

Why…?

☑ The first operation: Fontan, TCPC, Lateral Tunnel, Fenestrated –

Patients are unique per Participant ID and therefore can only die *once*. Analysis is based on the first event.

☐ The second operation: Fontan revision or conversion (Re-do Fontan)

☐ Both Fontan operations

☐ All operations

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

- 3/19/24 @ 12pmCT
- 4/16/24 @ 12pmCT
- 5/21/24 @ 12pmCT

Contact Information

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THANK YOU FOR JOINING!