Society of Thoracic Surgeons

Congenital Heart Surgery Database
New Data Manager Webinar

August 27, 2020

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

Agenda

- Welcome and Introductions
- Introduction to STS and the Databases
- The Role of the Data Manager
- How to read the Data Collection Form (DCF)
- What variables are required
- Intro to Data and Software Specs
- Intro to the Training Manual
- Submitting a Clinical Question
- Keys to abstracting data
- Building a relationship with your surgeon
- Ensuring Clean Data
- Data Submission Deadlines
- Additional STS Resources

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Introduction to STS and the Databases

- Society founded in 1964

"To enhance the ability of cardiothoracic surgeons to provide the highest quality care through education, research, and advocacy"

- Today has more than 7500 members in 99 countries
- More than 65 employees in Chicago and D.C.
- The first database was started in 1989
  - Response to HHS/HCFA (now CMS)
  - Malpractice lawsuits related to a misperception of the risk associated with surgery
  - JCAHO's requirement of all healthsystems to have a QA program used for surgeon recredentialing
  - Threats to reimbursement

Introduction to STS and the Databases

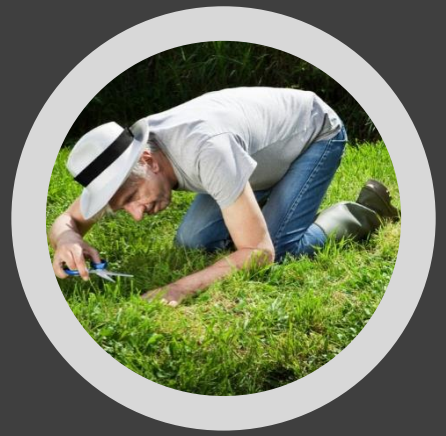
- Accomplishments of the databases
  - Improved Patient Outcomes/Patient Safety
  - Developed Clinical Practice Guidelines
    - Blood Conservation
    - Antibiotic Usage
  - Voluntary Public Reporting
    - Sites who publicly report have better outcomes

Introduction to STS and the Databases

- Congenital Heart Surgery Database (CHSD) started in 2003
- CHSD currently has 121 total sites
  - 118 North American
  - 3 International
  - 67 Anesthesia Participants
- 405 Surgeons participating
- 660 Anesthesiologists
- Contains more than 540,000 procedures for more than 330,000 patients
- 88.1% of the CHSD Participants participate in STS Public Reporting

The Data Abstractor/Data Manager
(Polling Question)

- You Are
  - Smart
  - Creative
  - Meticulous
  - Organized
  - Passionate (in a good way)
  - Most of you are nurses
  - Some of you are health management specialists or hold other roles
  - All of you are making a difference!



The Data Abstractor/Data Manager Role

- Your Role
  - Abstract Data
  - Submit Data
  - Clean Data
  - Quality Improvement Projects
  - Charting
  - Best Practices
  - Improve Workflow on Units
  - Improve Team Work
  - Quality Assurance Meetings with Surgeons and Supporting Departments
  - Administration Reporting on Star Ratings

STS National Database
Using data to drive quality

The Society of Thoracic Surgeons
Congenital Heart Surgery Database
Version 3.41
Updated May 5, 2020

ADMINISTRATIVE		
Participant ID: ParticID (10)	Patient Participating in STS-Related Clinical Trial: ClinTrial(81)	☐ None ☐ Trial 1 ☐ Trial 2 ☐ Trial 3 ☐ Trial 4 ☐ Trial 5 ☐ Trial 6
(If not None→)	STS-Related Clinical Trial ID: ClinTrialPatID(82)	

DEMOGRAPHICS		
Patient ID (software generated) PatID (520)	Patient Nat. ID (SSN): PatNationalID (110)	MRN: MedRecN (120)
Last Name: PatLName (140)	First Name: PatFName (150)	Middle Name: PatMName (170)
Region: PatRegion (180)	Postal Code: PatPostalCode (190)	Country: PatientCountry (201)

BIRTH INFORMATION

Did the patient have a laboratory confirmed diagnosis of Covid-19?
TempCode (6724)
☐ No (Harvest Code 10)
☐ Yes, prior to hospitalization for this surgery (Harvest Cor
☐ Yes, in hospital prior to surgery (Harvest 12)
☐ Yes, in hospital after surgery (Harvest Code 13)
☐ Yes, after discharge within 30 days of surgery (Harv

Date of Positive Covid-19 Test (closest to OR date) _____/_____/_____ (mm/dd/yyyy)
TempDt (6723)

Born by IVF: ☐ Yes ☐ No BornByIVF (202)

Patient Adopted: ☐ Yes ☐ No PatientAdopted (203)

Birth Location Known: ☐ Yes ☐ No BirthLocKnown (208)

(If Yes →) Born at Home ☐ Yes ☐ No BornHome (209)

(If No →) Birth Hospital Name Known: ☐ Yes ☐ No HospNameKnown (210)

(If Yes →) Birth Hospital Name: BirthHospName (211)

Birth Hospital TIN: BirthHospTIN (212)

Birth City: BirthCit (219)	Birth Region: BirthSta (220)	Birth Cou

Mode of Delivery Known: ☐ Yes ☐ No DelivModeKnown (232)

(If Yes →) Mode of Delivery: DelivMode (233)
☐ Spontaneous onset labor with vaginal delivery ☐ Spontaneou
☐ Induction of labor with vaginal delivery ☐ Induction
☐ Scheduled cesarean section ☐ Other

Mother's Gravidity and Parity known: ☐ Yes ☐ No *(If Yes ↓)* GravPa

Mother's Gravidity:
Gravidity (235)
Mother's
Parity

APGAR Scores Known: ☐ Yes ☐ No *(If Yes ↓)* ApgarKno

APGAR Score at 1 minute:
Apgar1 (238)

Mother's Name Known: ☐ Yes ☐ No

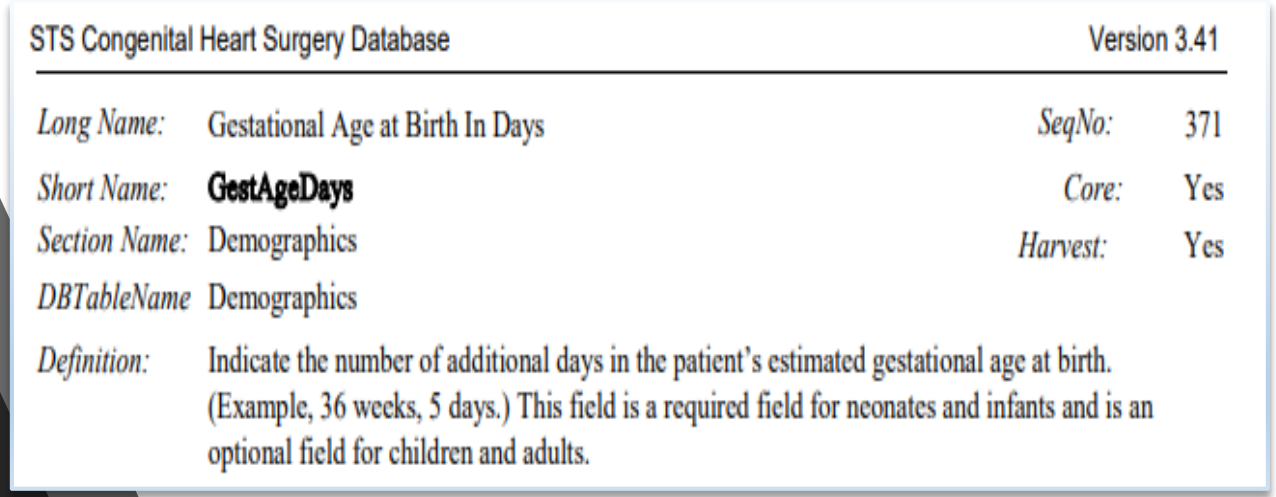
Reading the Data Collection Form (DCF)

Which Variables are Required?

- Per STS all variables are important
  - Parent/child relationships help reduce the number of missing data in the feedback reports
- Do not omit the fields included in the main sections of the feedback report:
    - Mortality analysis
    - Case mix models
    - Benchmark operations
    - Lesion specific section
- Complete all fields consistently so they are meaningful internally and over time

Data and Software Specifications

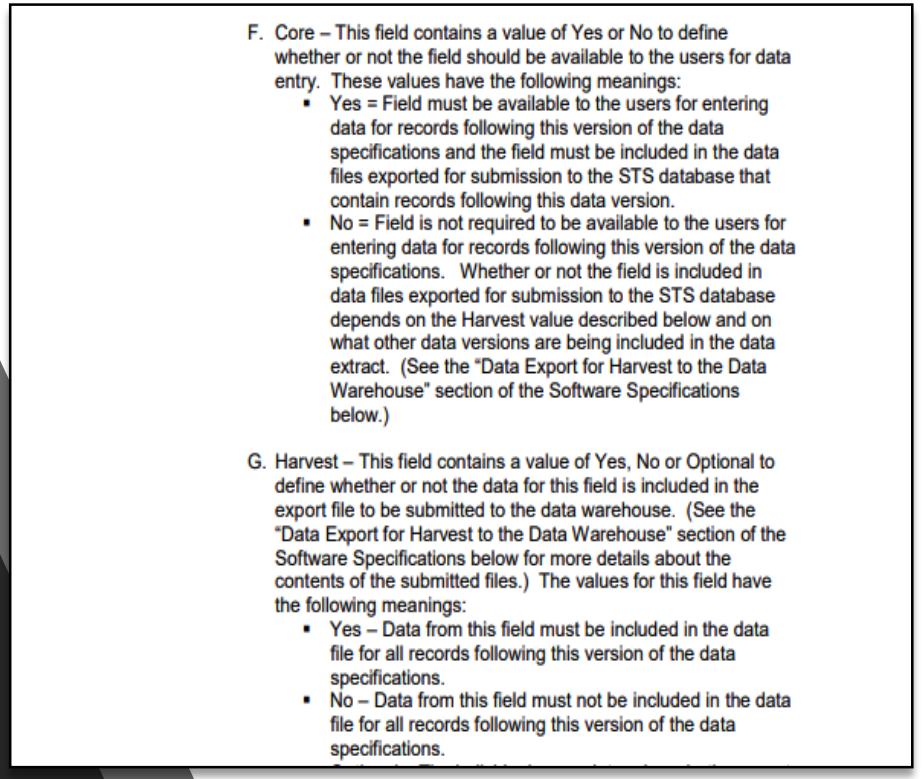
- The database is updated every 3 years
- The data and software specifications are key tools in this process
- It is important to understand how to read them
  - Definitions
  - Allowable values
  - Field type
  - Parent/Child Relationships
  - Specify vendor requirements



STS Congenital Heart Surgery Database — Version 3.41

Long Name:	Gestational Age at Birth In Days	*SeqNo:*	371
Short Name:	**GestAgeDays**	*Core:*	Yes
Section Name:	Demographics	*Harvest:*	Yes
DBTableName	Demographics		

Definition: Indicate the number of additional days in the patient's estimated gestational age at birth. (Example, 36 weeks, 5 days.) This field is a required field for neonates and infants and is an optional field for children and adults.



F. Core – This field contains a value of Yes or No to define whether or not the field should be available to the users for data entry. These values have the following meanings:
- Yes = Field must be available to the users for entering data for records following this version of the data specifications and the field must be included in the data files exported for submission to the STS database that contain records following this data version.
- No = Field is not required to be available to the users for entering data for records following this version of the data specifications. Whether or not the field is included in data files exported for submission to the STS database depends on the Harvest value described below and on what other data versions are being included in the data extract. (See the "Data Export for Harvest to the Data Warehouse" section of the Software Specifications below.)

G. Harvest – This field contains a value of Yes, No or Optional to define whether or not the data for this field is included in the export file to be submitted to the data warehouse. (See the "Data Export for Harvest to the Data Warehouse" section of the Software Specifications below for more details about the contents of the submitted files.) The values for this field have the following meanings:
- Yes – Data from this field must be included in the data file for all records following this version of the data specifications.
- No – Data from this field must not be included in the data file for all records following this version of the data specifications.

The Training Manual

- Guidance on abstracting variables
- Intent/Clarification provided to further explain definitions
- Update monthly with new FAQ's
- Refer to this to ensure you are abstracting correctly
- Check here first!

Long Name:	Endotracheal Intubation was Performed	*SeqNo:*	1067
Short Name:	**Intubate**	*Core:*	Yes
Section Name:	Operative	*Harvest:*	Yes
DBTableName:	Operations		
Definition:	Indicate whether an endotracheal intubation was performed.		

Intent / Clarification:

Data Source:	User
Format:	Text (categorical values specified by STS)

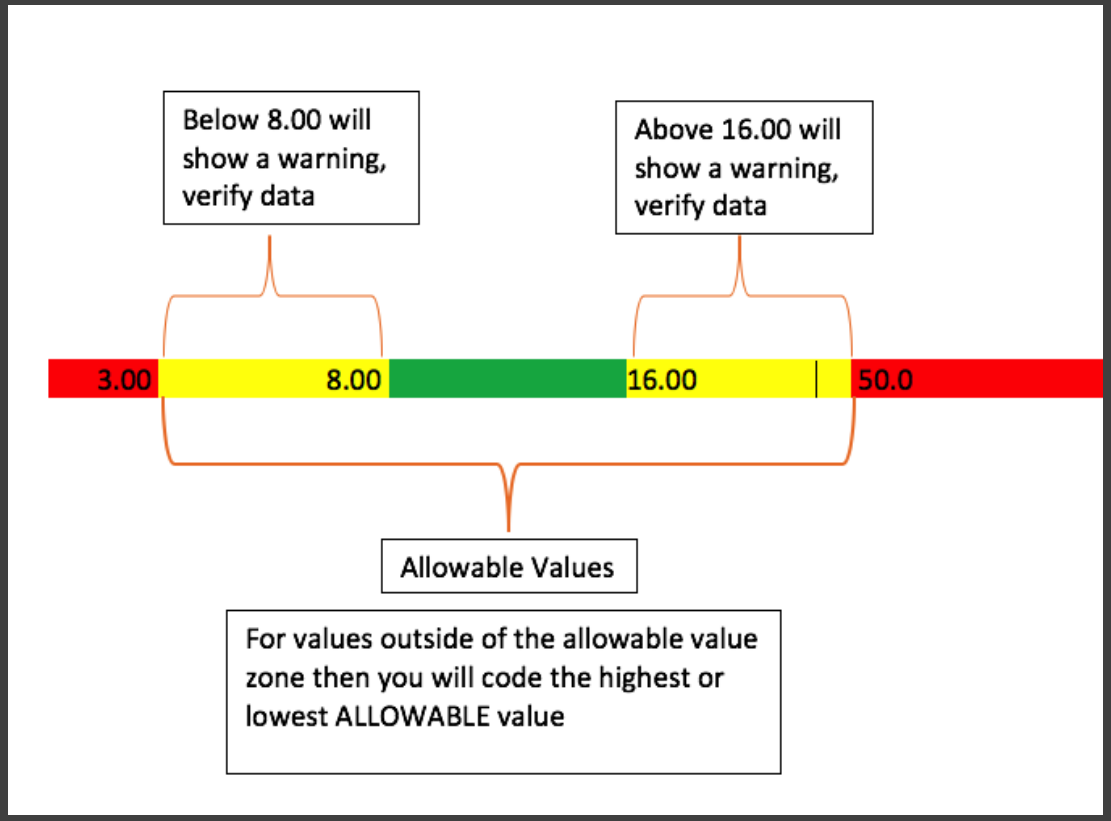
Harvest Codes:

Code:	*Value:*
1	Yes
2	No

June 2019: This is in regards to anesthesia data. When anesthesia data is pulled our understanding is that it is just CPB and No CPB Cardiovascular operations. The question is how are reoperations handled with regards to the anesthesia field? For example, Patient A has Operation 1- and is extubated in the OR. Patient requires reoperation and is/is not extubated. Are these separate anesthesia records, meaning they add to the denominator?
Yes, these are separate anesthesia cases and the same index cardiac operation. It does hit the dominator.
August 2020: The patient had an intubation and extubation on same-day surgery. He had to return to surgery a day later for bleeding, and was subsequently re-intubated for that surgery. In the post-op section for ventilator information, when entering data for the second surgery, is the intubation date and time to be entered as the date and time of the second surgery, or the date and time of the initial/index surgery from the day before? **The date and time the patient was intubated closest to the OR entry date and time should be used. This will be the intubation date and time of the second procedure in this scenario.**

Long Name:	Intubation Date and Time	*SeqNo:*	1068

Allowable Values



Long Name: Last Hemoglobin Level

Short Name: **HemoglobinLst**

Section Name: Pre-Operative Evaluation

DBTableName Operations

Definition: Indicate the hemoglobin level closest
management (induction area or operat

LowValue: 3.00 *UsualRangeLow:* 8.00

HighValue: 50.00 *UsualRangeHigh:* 16.00

Parent Long Name: Hemoglobin Level Measured

ParentShortName: HemoglobinMeasured

ParentValue: = "Yes"

ParentHarvestCodes: 1

Need assistance with coding a case?

If you have a question about submitting a case that is clinical in nature, then please submit it to the FAQ Mailbox.

- Refer to your Training Manual
  - Has your question already been answered or clarified?
- If not, you will need
  - Participant Identification (PID)
    - This is a 5-digit number starting with a 5
  - Shortname and Sequence Number
    - Can be found on the annotated DCF or TM
  - As much information you can provide to help us answer your question
    - We can only answer based off the information you provide

Clinical Question Request Form

Are you struggling with a clinical question regarding data abstraction? Fill out the Clinical Question Request Form and get a response within 30 days.

Ask a Question

FAQ Review Process

- Core Group Review
  - Meets monthly
  - We may ask you for more information
    - Can take up to 30 days for a response
  - Participant will receive an emailed response
- CHSD Training Manual Updated

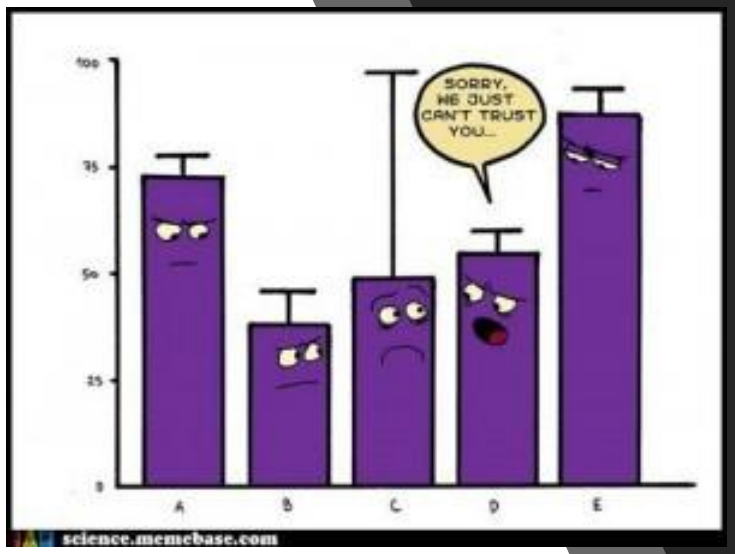
CHSD Core Group Call
August 12, 2020
3:00 PM CDT/ 4:00 PM EDT

1. **Sequence #:** 850
   Short Field Name: PreopFactors
   Is lab documentation required (and what would that be?) to confirm a preop factor hypercoag state diagnosis of Factor V Leiden mutation or is the H&P mention of diagnosis of Factor V Leiden mutation sufficient? Are there other diagnoses that are considered hypercoag conditions? Are there any diagnoses for preop factor hypo coag state that would not need to meet the need for abnormal PT/PTT/platelet count preop labwork?)

2. **Sequence #:** 1056
   Short Field Name: OpType
   Our center recently had a patient with a fundamental diagnosis of Pulmonary Atresia-VSD who had multiple procedures since birth 11 years ago. One of the procedures was a complete repair that included an RV-PA conduit, VSD patch closure and MAPCA unifocalization. The patient was transferred out of her home center to CHP for a heart transplant. A VAD implant was deemed necessary as a bridge to transplant. In addition to the VAD implant, the RV-PA conduit needed to be replaced and the VSD needed to be re-repaired for the VAD to function properly. The operation type that was chosen was VAD operation done with CPB. Unfortunately, this patient suffered a stroke a month later and the parents decided to withdraw support. There were no other index operations. I want to make sure this is the proper operation type for this case.

3. **Sequence #:** 4630
   Short Field Name: FelRes
   If an Anesthesiologist is not present for a procedure but a physician is providing the sedation, should I select Fellow or Resident Present?

Keys to Abstraction



- Organization is key
- Be consistent in where you obtain information but…
- Pay attention to source documentation
  - Use data that meets the listed requirements
    - Timeframe
    - Mode of testing
- If you can’t find it, ask your surgeon
- Do not guess. No data is better than bad data.
  - If you can’t find it, ask
  - This is different than out of range high/low value

Working with your Surgeons

- Surgeons are busy, be patient but persistent
- Be clear and concise
- Know what you are going to ask before you ask it
- Do your homework and know the facts
- Get involved with Quality Meetings and Department Meetings where the data is being discussed
- Ask to observe a case
- Offer to review data with the surgeon
- Offer tips on how documentation can be improved
    - Build EHR templates
    - Use Surgeon Worksheets
- Work with Nursing and OR staff – they can help you

Clean Data

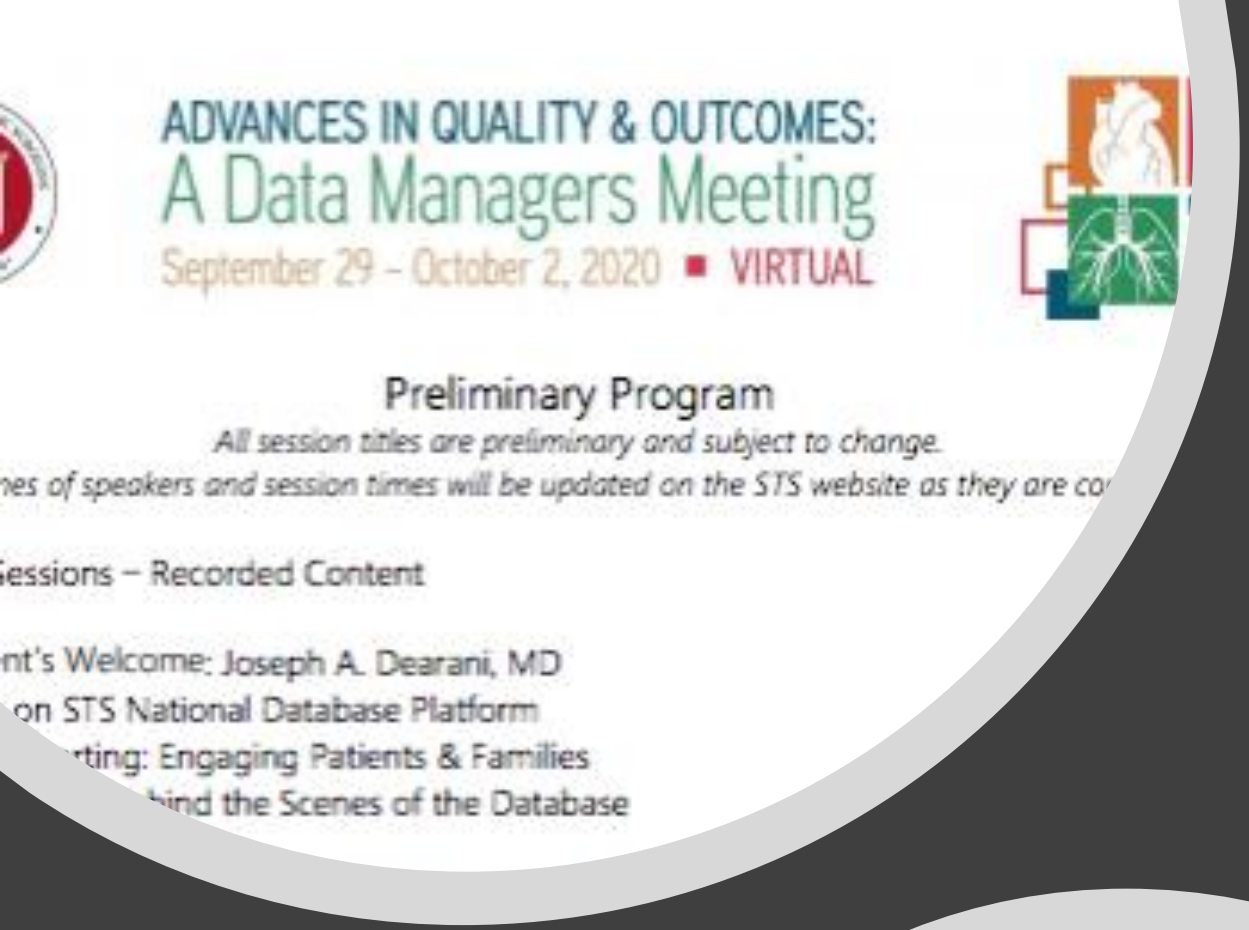
- Your vendor will allow you to run internal QA checks on your data prior to submission
- IQVIA, the data warehouse provides you with
  - Data Quality Report
  - Missing Variable Report
  - Harvest Summary Report
  - Critical Error Report
- Next upgrade will have ‘on-save’ consistency checks built into your vendors software that will prevent you from saving your data if certain errors are present

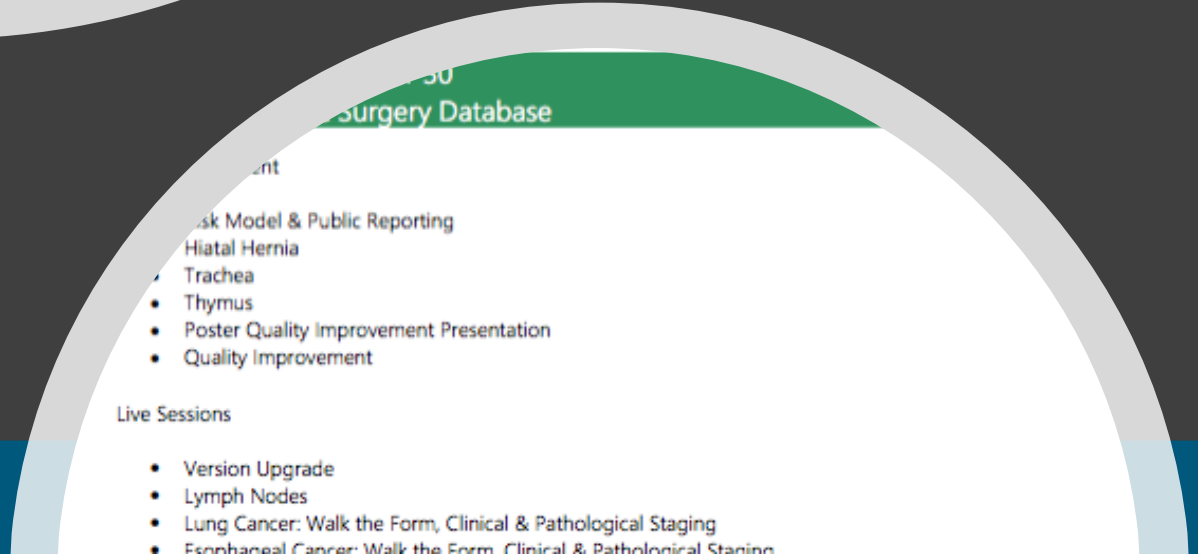
Data Submission Deadlines

- Harvest submission deadlines occur twice a year for the Congenital Heart Surgery Database
  - Spring and Fall
    - Each report will include a composite rating
  - Voluntary Public Reporting Results are based on the Spring Harvest

Additional STS Resources

- Monthly Didactic Webinar
- Monthly User Group Calls
- Quarterly New Data Manager Webinars
- Advances in Quality and Outcomes: A Data Managers Meeting
  - Virtual with live and pre-recorded content
  - CEU’s available





Advances in Quality and Outcomes: A Data Mangers Meeting (AQO)

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!

Thank you for joining!

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