The Society of Thoracic Surgeons

Adult Cardiac Surgery Database
Quality Improvement Series Webinar

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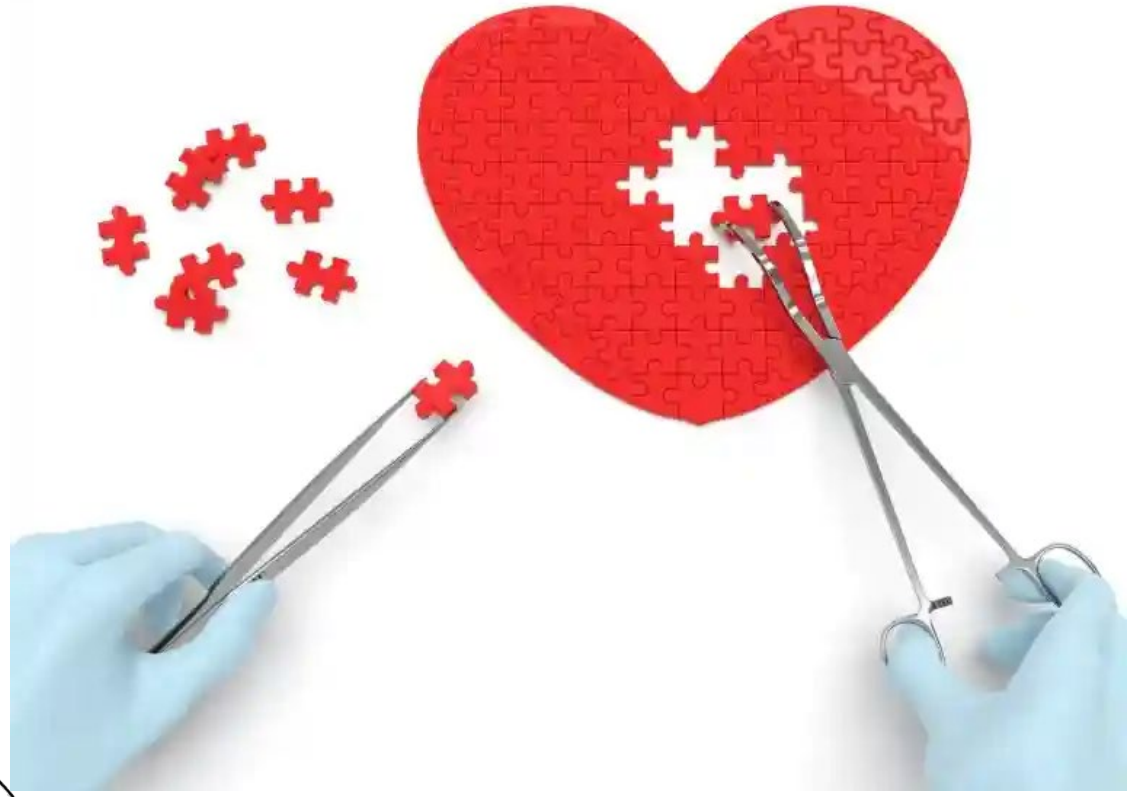
Health Catalyst
Manager – Chart Abstraction Services

April 15, 2026



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

Agenda

- Welcome and Introductions
- Brief STS Updates
- Guest Speaker-Erica Negrini
- Q&A

Important Dates-Timeline

April 13

2026 Harvest 1 Reports published

April 15

ACSD Quality Improvement Series Webinar @ 3pm ET/2pm CT

May 6

ACSD Monthly Webinar @ 3pm ET/2pm CT

May 20

ACSD Quality Improvement Series Webinar @ 3pm ET/2pm CT

May 29

2026 Harvest 2 closes 11:59 pm ET

Surgery dates: April 1, 2023-March 31, 2026

June 2

2026 Harvest 2 Opt-out deadline 5 pm ET

Important Dates-2026 Harvest

2026 Harvest

Term	Harvest Submission Window Close	Opt-Out Date	Includes Procedures Performed Through:	Report Posting	Comments
Harvest 1	February 20	February 24	December 31, 2025	Spring 2026	Star Rating
Harvest 2	May 29	June 2	March 31, 2026	Summer 2026	
Harvest 3	August 28	September 1	June 30, 2026	Fall 2026	Star Rating
Harvest 4	November 20	November 24	September 30, 2026	Winter 2026/2027	

Analysis for each harvest is based on a 36-month window.

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

Harvest Opt-Out closes at 5:00 p.m. Eastern on the date listed.

AQO 2026 – New Orleans

- September 30-October 2, 2026
- Intermacs & Pedimacs-Live Virtual Forum- September 24th
- CHSD & GTSD Sessions will be held Sept 30th (full day) and October 1st (half day)
- ACSD Sessions will be held October 1st (full day) and October 2nd (half day)
- Half day sessions will include breakout discussions for the on-site databases
- Submit an abstract! Deadline: Friday, June 12 at 11:59 pm ET
- Call for Abstracts - Advances in Quality & Outcomes (AQO): A Data Managers Meeting

Standardizing Surgical Procedure Documentation: A Templated Approach

Erica Negrini, RN, BSN

Health Catalyst

Manager - Chart Abstraction Services

- No financial disclosures

Objectives

- Analyze the impact of variability in surgical documentation on data quality and quality improvement efforts.
- Describe how a standardized templated approach improves accuracy, consistency, and reliability of surgical data.
- Identify strategies to implement templated documentation within their organizations to support continuous improvement.

THE PROBLEM….

Cardiothoracic operative notes vary in specificity and format impacting accurate and efficient data collection.

The WHY?

- Notes Vary by
  - Surgeon
  - Procedure type
  - Level of detail
  - EMR
- Leads to…
  - Increased abstraction time
  - Decreased abstraction accuracy and completeness
  - Increased surgeon queries for procedure clarification
- Not all about abstraction….
  - Effects surgeon documentation time
  - Coding and billing
  - Clinical quality and outcomes

Overcoming barriers

SURGEON BUY-IN	- Supported by Department Head - Surgeon Liaison
NEED FOR IT DEPARTMENT INVOLVEMENT	- Collaborate early to identify process
MULTIPLE PROCEDURE COMBINATIONS	- Streamlined template - Staged approach to template implementation
MORE THAN A WORKSHEET	- Note is a combination of story format and worksheet format - Free text fields

THE ANSWER:
A templated user smart phrase

- Consistent and complete surgery documentation
- Avoids duplicate charting for surgeons (no worksheets)
- Phased approach to roll out
- Flexibility with updates/changes
- Easy collaboration between data manager and surgeon

Where did we start?

- At the beginning

A surgical pause was performed in accordance with hospital regulations. Under general anesthesia, the patient was prepped and draped in the usual sterile fashion. Initial operative approach was operative approach. The sternal bone was divided using a sternal saw without difficulty. A retractor was used to expose the mediastinum and the thymic tissue was divided to expose the aorta. The pericardium was opened and noted to be free of adhesions.

Cannulation: The patient was prepped for cardiopulmonary bypass. Heparin dose of 3mg/kg was administered. Heparinization was guided by ACT. The arterial cannulation and the Venous Cannulation were cannulated and cardiopulmonary bypass was initiated. The patient was Temperature. Cardioplegia Cannulation. An aortic cross clamp was placed with aortic pressure reduced to 50mmHg. *** mls of Cardioplegia Type Cardioplegia was administered Cardioplegia Administered until cardiac arrest was achieved. Cardiac arrest was maintained with repeated delivery at regular intervals as required. Aortic root and left ventricular vents placed. CO2 Field Flooding - click if used, do not click if not used (Optional)

Where did we start?

- ….and the end

Post Procedure Details and Closing: Cross clamp was removed, and the heart was perfused. Rhythm Rhythm Restoration. Protamine was administered to reverse heparin (ACT and Hepcon guided). Patient was allowed to rest on bypass while the following chest tubes were placed; Drain Insertion. Patient weaned from bypass without difficulty. Patient was decannulated. Inspection of all operative sites was performed, and when hemostasis was adequate, Wires steel wires were used to close the sternum.The remainder of the sternal incision was closed in 3 layers with 1/0, 2/0 Vicryl sutures and 3/0 Monocryl.

*** assisted me throughout the case. Their help was essential for the entirety of the procedure and cell salvage.
Click to add Modifier 22 verbiage (Optional)
Click to add Modifier 62 verbiage (Optional)
The patient was transferred to *** in Condition condition. EF post cardiopulmonary bypass was ***.

Sponge, needle and instrument counts were reported as correct and accounted for.
CPB: ***
XC: ***
(EBL): Estimated blood loss (ml): * No surgery found *
Specimens removed: * Cannot find log *

Starting Slow

- Completed Isolated CABG note
  - Developed with surgeon liaison
  - Rolled out to surgeon liaison
  - Expanded to all surgeons
  - Adjusted note as needed

Vessels Bypassed:
Graft 1:

Conduit: Conduit
Conduit Quality: Conduit Quality
Proximal Site: Proximal Site
Distal Position: Distal Position
Distal Insertion Site: Site
Click to Document Intracoronary Shunt Size (O
Findings: ***

Graft 2:

Conduit: LIMA
Conduit Quality: excellent
Proximal Site: Aorta
Distal Position: end to side
Distal Insertion Site: Left main
Intracoronary Shunt Size: ***
Findings: ***

Conduits Harvested: A mammary retractor was then used to elevate the left chest and the IMA used was identified and dissected free using a IMA Harvest Technique technique from the level of the subclavian vein to its bifurcation point. Just prior to division of the IMA, heparin dose of 3mg/kg was administered. Heparinization was guided by ACT. Simultaneously, Vein/Radial Harvested segments were harvested from the Extremity extremities using Vein/Radial Harvest Technique techniques and incisions were closed in layers. Attention was turned back to the mediastinum.

Technique: Arrested Heart. Following conduit harvest, the patient was prepped for cardiopulmonary bypass.The arterial cannulation and the Venous Cannulation were cannulated and cardiopulmonary bypass was initiated. The patient was Temperature. Cardioplegia Cannulation. An aortic cross clamp was placed with aortic pressure reduced to 50mmHg. *** mls of Cardioplegia Type Cardioplegia was administered Cardioplegia Administered until cardiac arrest was achieved. Cardiac arrest was maintained with repeated delivery Cardioplegia Administered cardioplegia at regular intervals as required.

Adding Valves

Aortic Valve Procedure

Click if Previous Prosethesis Device Explanted

Aortic valve disease etiology: AV disease Etiology
Procedure performed: AV procedure performed
Annular Enlargement Performed: Yes/No
Implant Device, Model and Size: ***
Findings: An oblique aortotomy was made extending into the noncoronary sinus. The valve leaflets were resected, calcium debrided, and size assessed with a valve sizer.The decision was made to replace the valve with a size *** , Valve type . Annulus Assessment Alternating green and white non-everting, Plegeted or Non Plegeted mattressed 2-0 Ethibond aortic valve sutures were placed around the circumference of the annulus and passed through the sewing ring of the aortic valve. The valve was seated and the subvalvular space inspected carefully. After ensuring that the coronary ostia were unobstructed and that no pledget appeared trapped, the valve was secured in position and knots tied using Cor-Knot. The aortic root was closed in Layers layer with running 4-0 Prolene sutures.

Valves continued…Mitrals

Mitral Valve Procedure
Device Explanted: Type
Explant Etiology: Etiology
Explant Model: ***
Year of Implant: ***

Mitral Valve Etiology: MV Etiology
Procedure Performed: Mitral Valve Repair
Mitral Valve Approach: MV Approach
Repair Procedure: Repair Procedure
Resection Location: Resection location
Resection Method: Resection Method
Neochords Location: Neochords Location
Chordal Transfer Location Origin: Chordal Transfer Location
Patch Location: Patch Location
Implant Device Type: Type
Implant Model and Size: ***
Findings: ***

Mitral Valve Procedure

Mitral Valve Etiology: Class II: Increased Leaflet Mobility - Myxomatous degenerative prolapse/flail: Posterior Leaflet
Procedure Performed: Mitral Valve Repair
Mitral Valve Approach: transseptal
Repair Procedure: Annuloplasty and Neochords
Resection Location: Posterior
Resection Method: NA
Neochords Location: tWO 16MM CHORDS PALCED ON THE p2 PROLAPSE SEGMENT
Chordal Transfer Location Origin: NA
Patch Location: NA
Implant Device Type: Ring (full)
Implant Model and Size: Physio 2 size 34
Findings: Rupture chords on P2. Dilated annulus. Small posterior leaflet.

AORTAS…

Aorta Procedure Performed: Yes

Previous aortic procedures: Previous Aortic Procedures
Aorta etiology / procedure indication: Indication and Etiology
Arch anomalies: cvsurgeryarchanomalies
Patent IMA bypass graft: Y/N/NA
Endoleak involvement: Y/N
Patients genetic history: Genetic history
Family history of aorta disease: Family History

Aortic Valve and Root Replacement:
Click if previous device explanted (Optional): Device explanted: ***; Explant Etiology: ***; Explant Model: ***; Year of Implant: ***

Aortic valve disease etiology: AV disease Etiology
Procedure performed: Root replacement with Composite Valve Conduit. Coronary reimplantation Coronary reimplantation
Implant(s) device, model and size: ***
Findings: Findings

Ascending Aorta / Aortic Arch Procedure(s)
Click if previous device explanted (Optional): Device explanted: ***; Explant Etiology: ***; Explant Model: ***; Year of Implant: ***

Proximal location: Proximal Location
Distal technique: Distal Technique
Distal site: Distal Site
Distal Extension: Distal Extension
Arch branch reimplantation: Arch Branch Reimplantation
Implant device, model and size: ***
Findings: The ascending aorta was transected at the level of the sinotubular junction, and the aneurysm excised and sent for histology. The aorta was sized to a *** mm Aortic Grafts. Running 4/0 Prolene suture was used to construct the proximal anastomosis (located ***). The suture line was tested using cardioplegia to pressurize the graft. Next the distal suture line was constructed using 4/0 Prolene suture.

Putting it all together…

Procedure:
Aortic valve replacement (Inspiris 23 mm)
Mitral valve replacement (Epic Plus 27 mm)
Septal myectomy

Surgical Priority: Elective

NYHA Class:NYHA IV

Redo Sternotomy: No
Preoperative Diagnosis: MS, Severe AS, and septal hypertrophy
Postoperative Diagnosis: MS, Severe AS, and septal hypertrophy

A surgical pause was performed in accordance with hospital regulations. Under general anesthesia, the patient was prepped and draped in the usual sterile fashion. Initial operative approach was full conventional sternotomy. The sternal bone was divided using a sternal saw without difficulty. A retractor was used to expose the mediastinum and the thymic tissue was divided to expose the aorta. The pericardium was opened and noted to be free of adhesions.

Cannulation: The patient was prepped for cardiopulmonary bypass. Heparin dose of 3mg/kg was administered. Heparinization was guided by ACT. The aorta and the SVC and IVC were cannulated and cardiopulmonary bypass was initiated. The patient was cooled to 32°C. An antegrade cardioplegia catheter was placed and secured in the aortic root. An aortic cross clamp was placed with aortic pressure reduced to 50mmHg. 1500 mls of Del Nido Cardioplegia was administered antegrade until cardiac arrest was achieved. Cardiac arrest was maintained with repeated delivery at regular intervals as required. Aortic root and left ventricular vents placed. CO2 field flooding was utilized.

Cannulation: Following conduit harvest, the patient was prepped for cardiopulmonary bypass. The aorta and the SVC and IVC were cannulated and cardiopulmonary bypass was initiated. The patient was cooled to 34°C. An antegrade cardioplegia catheter was placed and secured in the aortic root and A retrograde cardioplegia catheter was placed and secured in the coronary sinus. An aortic cross clamp was placed with aortic pressure reduced to 50mmHg. 1200 mls of Del Nido Cardioplegia was administered antegrade and retrograde until cardiac arrest was achieved. Cardiac arrest was maintained with repeated delivery at regular intervals as required. Aortic root and left ventricular vents placed.

Vessels Bypassed:
Graft 1:
Conduit: L Saphenous vein
Conduit Quality: good
Proximal Site: Aorta
Distal Position: end to side
Distal Insertion Site: OM
Findings: Large caliber target vessel identified. Mild calcification present at arteriotomy site. OM grafted with 7-0 prolene suture in running fashion. Adequate runoff flow confirmed on distention testing with blood cardioplegia.

Mitral Valve Procedure
Mitral Valve Etiology: Stenosis - Class IIIA: Restricted leaflet mobility (systole and diastole) - MAC
Procedure Performed: Mitral Valve Replacement
MV Approach: transseptal (extended)
Reason Replacement Needed: Calcification
MV Repair Attempted: No
Valve Implant Description: Bioprosthetic, Device name - EPIC Plus, size - 27 mm
Findings: The anterior valve leaflet was resected. The anterior chords were removed.. The posterior valve leaflet was preserved. The posterior chords were left in situ.. Alternating green and white 2-0 Ethibond plegeted mattress sutures were then placed around the circumference of the annulus with the pledgets on the atrial side. Extensive, circumferential MAC was present. Suture were able to be passed through the annular tissue and no annular debridement was required. The sutures were then passed through the sewing ring of the valve. The valve was then seated, and the knots secured using CorKnot. The valve was carefully inspected and confirmed to be in good position with freedom from leaflet obstruction. The atriotomy was closed with running 4-0 Prolene.

Prolene sutures.

Atrial Fibrillation Procedures and Appendage Clip:
None

Additional Procedures:
Subaortic Stenosis Resection - muscle. After the aortic valve leaflets were resected, the septum was exposed. Using a #11 blade, we carefully resected parts of the interventricular septum.

Mechanical Assist Device (Inserted or Removed):
No

Post Procedure Details and Closing:
High suction was applied to the aortic root/LV vents. After standard de-airing maneuvers, the aortic cross clamp was released and the heart was perfused. Rhythm spontaneously restored, 2 right ventricular pacing wires placed for backup. After a period of perfusion, patient allowed to rest on bypass while the following chest tubes were placed; 32 Fr right pleural, 32 Fr left plural, and 32 Fr mediastinal . Patient weaned from bypass without difficulty. Protamine was administered to reverse heparin (ACT and Hepcon guided) and the patient was decannulated. Inspection of all operative sites was performed and when hemostasis was adequate, all suture lines secured with 4/0 Prolene over sew. Surgical steel wires were used to close the sternum and the remainder of the sternal incision was closed in 3 layers with 1/0, 2/0 Vicryl sutures and 3/0 Monocryl.

TEE Findings Post Cardiopulmonary Bypass:

- Ejection Fraction: adequate
- Valve Function (Specify valve): Minor PVL at mitral prosthesis. No PVL at aortic prosthesis.

[redacted] assisted me throughout the case. Their help was essential for the entirety of the procedure and cell salvage.

Dr[redacted] served as co-surgeon due to need for complex multi-procedural case with extremely severe calcification and septal hypertrophy. Please see note from concomitant surgeon(s)".
The patient was transferred to ICU in stable condition.

Sponge, needle and instrument counts were reported as correct and accounted for.
CPB: 192 min
XC: 155 min
(EBL): Estimated blood loss (ml): 1600 ml

133 DISCREET TEMPLATED FIELDS

168 REGISTRY DATA COMPONENTS

RESULTS

- Near 100% compliance in usage on STS surgeries
  - 3 hospitals, 2 surgical groups, 11 surgeons
- Decreased abstraction time ($$$) with improved accuracy
- Near elimination of abstractor queries to providers
- Additional procedure notes requested and implemented

THANK YOU

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Open Discussion

Please use the raise-hand function.

Please use the Q&A Function.

We will answer as many questions as possible.

We encourage your feedback and want to hear from you!

Contact Information

- Carole Krohn, Director, STS National Database
  - ckrohn@sts.org
- Nancy Honeycutt, STS National Database Manager, ACSD, Intermacs/Pedimacs
  - nhoneycutt@sts.org
- STSDB@sts.org
  - Database Operational Questions (Billing, Contracts, Contacts)
- STSDB_Helpdesk@sts.org
  - IQVIA/Database Platform Questions (Uploader, DQR, Missing Variable, Dashboard, Password and Login)
- STSDB-FAQ@sts.org
  - Clinical Questions

We Need You!

If you or someone at your site have been successful in implementing a QI project, please reach out to Nancy Honeycutt @ nhoneycutt@sts.org.

Thank You for Joining!

Reminder: Our next ACSD Monthly Webinar will be held on Wednesday, May 6, 2026 at 3pm ET/2pm CT.