

Society of Thoracic Surgeons

Congenital Heart Surgery Database Monthly Webinar

December 17, 2024

Agenda

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

STS Updates

- December Training Manual posted
- Fall 24 Harvest Update
 - Surgery dates 7/1/2020 6/30/2024
 - Report released December 9th, 2024
- 2025 Harvest Schedule has been posted
 - Spring 2025 close date: March 21, 2025
 - Fall 2025 close date: **September 26, 2025**
- Public Reporting Update
 - Website updated Nov. 11th using results from Spring 24 Harvest

CHSD Executive Dashboard Now Available

- Risk-Adjusted Operative Mortality (Table 16)
 - Reported by STAT Category for each age group
 - Combined reporting of age groups and STAT Categories, mimicking the Publicly Reported Data
- Longitudinal Risk-Adjusted Operative Mortality (Table 16)
 - Provides trending of risk-adjusted operative mortality over the last four harvests (two years) by STAT category and age group.
- Post-operative Length of Stay by STAT Category
 - Provides participant vs. STS benchmark for post-op LOS by STAT Category using the previous harvest data.
- Near real-time update of the number of procedures submitted to the STS CHSD reported by year
- Participant performance on meeting inclusion eligibility for analysis.
 - Utilizing Green, Yellow, and Red status provides sites with a streamlined approach to ensuring their data will be included in the upcoming harvest analysis.
 - Includes drill-down capabilities to allow easy access to cases needing attention

Education Updates - agenda

- Changes to OpTypes VAD Operation Done with/without CPB (Optypes 6 & 7)
 - Case inclusion requirements
 - Define optype qualities
- Percutaneous VAD implant coding instructions
- Case scenarios

Current Guidance: TM page 8

CHSD General Information

Case Inclusion — all cases performed by a congenital cardiothoracic surgeon included on a participant's Schedule A and per the STS contract are to be included in the CHSD. Single institution contracts allow only the cases completed at the single facility to be entered. Multi-institutional contracts allow for cases completed at the listed facilities to be entered.

The current recommendation for the adult congenital patients is to continue to enter the cases as you have been in the past. For example, a free-standing children's hospital will continue to enter every procedure completed at their institution. An institution with both pediatric and adult surgical services will continue to enter the combined patients in the congenital or adult database or both. Institutions should have a consistent data entry strategy at the programmatic level and not make the determination based on a patient's outcome. More guidance on adult congenital case inclusion is anticipated.

In the event a cardiac surgeon (listed on the participant's Schedule A) completes a case with another surgical service (e.g., general surgery), the case is to be included in the CHSD if the cardiac surgeon is a co-surgeon and dictated their own operative note (the cardiac surgeon will be the primary surgeon in the database for the case). If the cardiac surgeon truly serves as an assistant to the other surgical service, the case cannot be entered into the CHSD (update Sept-23).

What's changing?

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 - 1. Encourage complete data capture for each event
 - 2. Ensure sites capture VAD cases consistently
 - 3. Allow future modeling to incorporate VAD events/fields
- 2. Better define cases which should be considered "OpType VAD" (OpTypes 6 and 7)
 - 1. (6) VAD Operation Done with CPB
 - 2. (7) VAD Operation Done without CPB

VAD Operation Done with CPB & VAD Operation Done without CPB

Coding Notes:

Code a multi-component procedure as OpType VAD if and only if

1. All components of the procedure were undertaken solely to facilitate placing the patient on VAD support

VAD Operation Done with CPB & VAD Operation Done without CPB

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2. Durable support cannula(s) are placed during the procedure

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- 4. At least one of the following are true
 - a. **Primary diagnosis** of the operation is one of the cardiomyopathy codes
 - (740) Cardiomyopathy (including dilated, restrictive, and hypertrophic)
 - (750) Cardiomyopathy, End-stage congenital heart disease
 - (2560) Cardio-respiratory failure not secondary to known structural heart disease
 - b. Patient is currently **actively** listed for heart transplant
 - c. A priori decision has been made to list the patient for heart transplant after a defined post-operative period

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If an *interventional cardiologist* places, performs a procedure on, or removes a temporary heart assist device and **the surgeon only provides access**, then code:

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OpType: (777) Other

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If an *interventional cardiologist* places, performs a procedure on, or removes a temporary heart assist device and **the surgeon only provides access**, then code:

OpType: (777) Other

Primary Procedure: Appropriate type of access

(3660) Open chest exposure for transcatheter/per- ventricular/per-

atrial procedure or

(3670) Peripheral vascular access for transcatheter procedures

(e.g., Impella, Tandem Heart, etc.)

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Primary Procedure: Appropriate type of access

(3660) Open chest exposure for transcatheter/per- ventricular/per-

atrial procedure or

(3670) Peripheral vascular access for transcatheter procedures

Secondary Procedure(s): Appropriate R/L heart assist device code

(3820) Right/Left heart temporary assist device, Implant and/or

(3830) Right/Left heart temporary assist device, Explant and/or

(3840) Right/Left heart temporary assist device, Procedure

(e.g., Impella, Tandem Heart, etc.)

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(3840) Right/Left heart temporary assist device, Procedure



Open the VAD section and complete implant/explant details, if applicable

Question #1

Patient with myocarditis undergoes implant of a Berlin Heart device. Should this case be entered into the CHSD?

- ☐ Yes, all operations should be entered into the database
- ☐ No, VAD operations are optional to enter

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Question #2

Patient with myocarditis undergoes implant of a Berlin Heart device. What is the correct Operation Type?

- ☐ CPB Non-Cardiovascular
- □ VAD operation done with CPB
- ☐ VAD operation done without CPB
- ☐ More information is needed

Answer #2

Patient with myocarditis undergoes implant of a Berlin Heart device. What is the correct Operation Type?

- ☐ CPB Non-Cardiovascular
- □ VAD operation done with CPB
- ☐ VAD operation done without CPB
- More information is needed

OpType VAD is correct, but unknown if CPB was utilized

Question #3

Patient with myocarditis undergoes implant of a Berlin Heart device for durable long-term support as a bridge to transplant. What is the correct primary procedure?

- ☐ Right/Left heart temporary assist device, Implant
- □ VAD, Implant

Answer #3

Patient with myocarditis undergoes implant of a Berlin Heart device for durable long-term support as a bridge to transplant. What is the correct primary procedure?

☐ Right/Left heart temporary assist device, Implant

✓ VAD, Implant

2380	VAD, Implant	Insertion of a ventricular assist device (VAD). A VAD is an assist device implanted with the intent of providing prolonged durable support. Includes VAD implants as a bridge to transplant or destination therapy (update May-24).
3820	Right/Left heart temporary assist device, Implant	Insertion of a left or right temporary assist device. A temporary device is an assist device implanted without the intent of providing prolonged durable support.

Confirm with your surgeon if documentation unclear regarding durable/long-term support

Question #4

Patient with myocarditis undergoes implant of a temporary ventricular assist device using Berlin (durable) cannula and CPB support. What is the correct Primary procedure?

- ☐ Right/Left heart temporary assist device, Implant
- ☐ Right/Left heart temporary assist device, Procedure
- ☐ VAD, Implant

Answer #4

Patient with myocarditis undergoes implant of a temporary ventricular assist device using Berlin (durable) cannula and CPB support. What is the correct Primary procedure?

- ☐ Right/Left heart temporary assist device, Implant
- ☐ Right/Left heart temporary assist device, Procedure
- ☑ VAD, Implant

Training Manual:

3820

Right/Left heart temporary assist device, Implant

Insertion of a left or right temporary assist device. A temporary device is an assist device implanted without the intent of providing prolonged durable support.

Coding Notes:

Examples include percutaneous Impella and Tandem Heart catheter-based devices.

If this procedure is coded, complete the VAD section questions in the database.

If durable cannulas are used, code procedure (2380) VAD, Implant regardless of the device it is connected to. For example, utilizing Berlin heart cannulas with a Centrimag device. Code VAD, Implant.

If not clear in the medical record, confirm with your surgeon if the intent of the implanted device is to

Patient undergoes BDCPA with atrial septectomy and experiences a cardiac arrest in ICU requiring ECMO cannulation. The patient is listed for transplant and is transitioned to durable VAD support. During the procedure, CPB is utilized, and the previously created septal defect is closed to facilitate the VAD. What is the operation type for the transition to VAD support?

- ☐ CPB Cardiovascular
- ☐ VAD operation done with CPB

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☐ CPB Cardiovascular

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- 1. All components of the procedure were undertaken solely to facilitate placing the patient on VAD support <u>and</u>
- 2. Durable support cannulas are placed during the procedure and
- 3. Decision to place VAD support was made prior to the patient entering the OR and
- 4. At least one of the following are true:
 - a) Primary diagnosis of the operation is one of the following:
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- ✓1. All components of the procedure were undertaken solely to facilitate placing the patient on VAD support <u>and</u>
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If in doubt, discuss surgical

plan/details with your surgeon.

- 2. Durable s
- 3. Decision
- 4. At least o
 - - 750) Cardiomyopathy, End-stage congenital heart disease
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Patient undergoes DORV repair and cannot separate from bypass in the OR. The patient is transitioned from CPB to a temporary CentriMag device and recovers in the ICU. The heart failure team is following the patient and deems them a heart transplant candidate if recovery does not occur. What is the Operation type for the DORV repair?

- ☐ CPB Cardiovascular
- ☐ VAD operation done with CPB

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☐ VAD operation done with CPB

CPB Cardiovascular

Cardiovascular procedure (includes the heart, great vessels, or any branches of the great vessels), and cardiopulmonary bypass (CPB) is used.

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Patient with single ventricle anatomy and severe systemic AV valve regurgitation is deemed not to be a surgical candidate. The patient requires VAD support while the transplant evaluation is completed. The surgeon performs an aortopulmonary amalgamation (DKS) to facilitate placement on the Berlin Heart device and utilized durable cannulas and CPB. What is the Operation type for the DKS procedure?

- ☐ No CPB Cardiovascular
- ☐ VAD operation done with CPB

Patient with single ventricle anatomy and severe systemic AV valve regurgitation is deemed not to be a surgical candidate. The patient requires VAD support while the transplant evaluation is completed. The surgeon performs an aortopulmonary amalgamation (DKS) to facilitate placement on the Berlin Heart device and utilized durable cannulas and CPB. What is the Operation type for the DKS procedure?

□ No CPB Cardiovascular

✓ VAD operation done with CPB

- \checkmark I. All components of the procedure were undertaken solely to facilitate placing the patient on VAD support \underline{and}
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Patient s/p Fontan procedure continues to have persistent heart failure requiring VAD placement and is listed for transplant. The patient undergoes CentriMag device placement with Berlin cannulas. Ten days later, the patient requires a pump exchange without CPB due to clots and placement of a new pacemaker lead. What is the Optype for the pump exchange and pacemaker procedure?

- □ No CPB Cardiovascular
- ☐ VAD operation done without CPB

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- ☐ No CPB Cardiovascular
- ✓ VAD operation done without CPB

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Patient with heart failure goes to the cath lab and the surgeon performs a right axillary cutdown to facilitate the interventionalist's placement of an Impella device. What is the Operation type?

- □ Other
- ☐ VAD operation done without CPB

Patient with heart failure goes to the cath lab and the surgeon performs a right axillary cutdown to facilitate the interventionalist's placement of an Impella device. What is the Operation type?

- **✓** Other
- ☐ VAD operation done without CPB

The surgeon did not implant/insert the device but provided access for the procedure

Patient with heart failure goes to the cath lab and the surgeon performs a right axillary cutdown to facilitate the interventionalist's placement of an Impella device. What is the primary procedure?

- ☐ Right/Left heart temporary assist device, Implant
- Peripheral vascular access for transcatheter procedures

Patient with heart failure goes to the cath lab and the surgeon performs a right axillary cutdown to facilitate the interventionalist's placement of an Impella device. What is the primary procedure?

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- M Peripheral vascular access for transcatheter procedures

The surgeon did not implant/insert the device but provided access for the procedure

OpType VAD with Multi-Component Procedures

In Summary -

- Refer to TM (January '25) for detailed explanation
- All VAD operations are to be submitted
- New rule applies to multi-component procedures completed with VAD implants (may include VAD procedures and VAD change outs)

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

- 1/21/25 @ 12pmCT
- 2/18/25 @ 12pmCT
- 3/18/25 @ 12pmCT

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THANK YOU FOR JOINING!