Society of Thoracic Surgeons

Congenital Heart Surgery Database
User Group Call

July 18, 2023
Agenda

• Welcome and Introduction
• STS Update
• STS Data Manager Education (Chasity Wellnitz and Leslie Wacker, CHSD Consultants)
• Q&A
• 6.23.2 Training Manual is posted!

• STS Website and IQVIA Library Cleanup being conducted this week
  • Purpose is to maintain version control
  • Moving forward Additional Resources will be included in the Analyses Overview and Training Manual
    • Rules to Determine Primary Diagnosis and Primary Procedure
    • STS Combination Procedure Codes

• Appendix C: STAT Categories
  • Will be moved to Version 6.23.2 page (currently resides under v3.41 page)
  • Minor updates to include update reference to 6.23.2 and the highlighting of all combination procedures
    • Refer to Combination Procedures listed in TM and Analyses Overview for all possible component procedures
    • NO CHANGES TO ANY SCORES OR CATEGORIES

• Fall 2023 Harvest: Includes Surgery dates 7/1/2019 - 6/30/2023
  • Harvest Closes September 15th @ 11:59pmET
  • Opt Out no later than September 19th
6.23.2 Data Manager Education

July 18, 2023
Discussion Topics

Hybrid Procedures Revisited
<table>
<thead>
<tr>
<th>2180</th>
<th>Hybrid Approach &quot;Stage 1&quot;, Stent placement in arterial duct (PDA) + application of RPA &amp; LPA bands</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>During the same operation, procedure stent placement in arterial duct (PDA) and application of bilateral (right and left) pulmonary artery (PA) bands.</td>
</tr>
</tbody>
</table>

**Coding Notes:**

See [General information Hybrid Procedures](#) for additional information.
To code the following procedures, interventional cardiologist and surgeon must be involved in the procedure:

- (2170) Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)
- (2180) Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands
To code the following procedures, one of the listed hybrid approach stage I procedures (2160, 2170, 2180) must have been completed:

- (2140) Hybrid approach "Stage 2", Aortopulmonary amalgamation + Superior Cavopulmonary anastomosis(es) + PA Debanding + Aortic arch repair (Norwood [Stage 1] + Superior Cavopulmonary anastomosis(es) + PA Debanding)

- (2150) Hybrid approach "Stage 2", Aortopulmonary amalgamation + Superior Cavopulmonary anastomosis(es) + PA Debanding + Without aortic arch repair
The following cannot be the primary procedure of an operation:

- (2170) Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)
- (2760) Hybrid Approach, Transcardiac balloon dilation
- (2770) Hybrid Approach, Transcardiac transcatheter device placement

_and_ the access provided by the surgeon should be coded:

- (3660) Open chest exposure for transcatheter/per-ventricular/per-atrial procedure
- (3670) Peripheral vascular access for transcatheter procedures
The operation type for the following procedures is (777) Other:

- (2170) Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)
- (2760) Hybrid Approach, Transcardiac balloon dilation
- (2770) Hybrid Approach, Transcardiac transcatheter device placement

*unless* done concomitantly with another procedure

- the other procedure would then determine the operation type
- excludes the surgical access procedures
Patient with diagnosis of Single ventricle, Other goes to the hybrid suite for bilateral pulmonary artery banding and stent placement in the arterial duct without cardiopulmonary bypass.

Which of the following should be coded as the primary procedure?

- (2170) Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)
- (2180) Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands
- (2770) Hybrid Approach, Transcardiac transcatheter device placement
Patient with diagnosis of Single ventricle, Other goes to the hybrid suite for bilateral pulmonary artery banding and stent placement in the arterial duct without cardiopulmonary bypass.

Which of the following should be coded as the primary procedure?

- (2170) Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)
- (2180) Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands
- (2770) Hybrid Approach, Transcardiac transcatheter device placement
Patient with diagnosis of Single ventricle, Other goes to the hybrid suite for bilateral pulmonary artery banding and stent placement in the arterial duct without cardiopulmonary bypass.

- (2180) Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands

The patient is undergoing a hybrid approach procedure utilizing combined catheter and surgical techniques where there is bilateral PA banding, and the ductus is being maintained open with a stent.
Patient with diagnosis of Single ventricle, Other goes to the hybrid suite for bilateral pulmonary artery banding and stent placement in the arterial duct without cardiopulmonary bypass.

What is the operation type for this procedure?

- No CPB Cardiovascular
- CPB Cardiovascular
- Other
Patient with diagnosis of Single ventricle, Other goes to the hybrid suite for bilateral pulmonary artery banding and stent placement in the arterial duct without cardiopulmonary bypass.

What is the operation type for this procedure?

- No CPB Cardiovascular
- CPB Cardiovascular
- Other
Hybrid Procedure – Example #2

Patient with HLHS goes to the hybrid suite for ductal stenting. The surgeon performed a femoral artery cutdown through which interventional cardiology successfully placed the stent.

Which of the following should be coded as procedures (select all that apply)?

- (2170) Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)
- (2180) Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands
- (1550) Cardiovascular catheterization procedure, Therapeutic, Stent insertion
- (3670) Peripheral vascular access for transcatheter procedures
Patient with HLHS goes to the hybrid suite for ductal stenting. The surgeon performed a femoral artery cutdown through which interventional cardiology successfully placed the stent.

Which of the following should be coded as procedures (select all that apply)?

- (2170) Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)
- (2180) Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands
- (1550) Cardiovascular catheterization procedure, Therapeutic, Stent insertion
- (3670) Peripheral vascular access for transcatheter procedures
Hybrid Procedure – Example #2

☑ (2170) Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)
☑ (3670) Peripheral vascular access for trans catheter procedures

When one of the above listed hybrid approach procedures is completed (2170, 2760, & 2770), the surgical/procedural access provided by the surgeon for the hybrid approach procedure should also be included as a procedure. The surgical access provided will not determine the operation type for the operation. The surgical access procedures are:

- (3660) Open chest exposure for transcatheter/per-ventricular/per-atrial procedure
- (3670) Peripheral vascular access for transcatheter procedures
Patient with HLHS goes to the hybrid suite for ductal stenting. The surgeon performed a femoral artery cutdown through which interventional cardiology successfully placed the stent.

Which of the following is the primary procedure?

- (2170) Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)
- (2180) Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands
- (1550) Cardiovascular catheterization procedure, Therapeutic, Stent insertion
- (3670) Peripheral vascular access for transcatheter procedures
Patient with HLHS goes to the hybrid suite for ductal stenting. The surgeon performed a femoral artery cutdown through which interventional cardiology successfully placed the stent.

Which of the following is the primary procedure?

- (2170) Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)
- (2180) Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA) + application of RPA & LPA bands
- (1550) Cardiovascular catheterization procedure, Therapeutic, Stent insertion
- (3670) Peripheral vascular access for transcatheter procedures
Primary Procedure: (3670) Peripheral vascular access for transcatheter procedures

**Primary Procedure Determination**

Some of the hybrid approach procedures cannot be the primary procedure of an operation. If completed with another procedure, follow the rules for determining the primary procedure ([SeqNo 1355 Primary Procedure](#)). The following hybrid approach procedures *cannot* be listed as the primary procedure of an operation:

- (2170) Hybrid Approach "Stage 1", Stent placement in arterial duct (PDA)
- (2760) Hybrid Approach, Transcardiac balloon dilation
- (2770) Hybrid Approach, Transcardiac transcatheter device placement
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<tr>
<th>(2170) Hybrid Approach &quot;Stage 1&quot;, Stent placement in arterial duct (PDA)</th>
</tr>
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<tbody>
<tr>
<td>• Placement of a stent in the arterial duct</td>
</tr>
<tr>
<td>• Code this procedure if a stent was placed in the arterial duct to facilitate pulmonary to systemic blood flow in a patient with ductal dependent systemic circulation, such as HLHS, IAA, etc.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(1550) Cardiovascular catheterization procedure, Therapeutic, Stent insertion</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Invasive therapeutic procedure involving implantation of a stent.</td>
</tr>
<tr>
<td>• Code this procedure if a stent was placed in the arterial duct to facilitate systemic to pulmonary blood flow in a patient with ductal dependent pulmonary circulation, such as PA-VSD, PA-IVS, etc.</td>
</tr>
</tbody>
</table>
Hybrid Procedure – Example #2

Patient with HLHS goes to the hybrid suite for ductal stenting. The surgeon performed a femoral artery cutdown through which interventional cardiology successfully placed the stent.

What is the operation type for this procedure?

- No CPB Cardiovascular
- CPB Cardiovascular
- Other
Patient with HLHS goes to the hybrid suite for ductal stenting. The surgeon performed a femoral artery cutdown through which interventional cardiology successfully placed the stent.

What is the operation type for this procedure?

- No CPB Cardiovascular
- CPB Cardiovascular
- Other
Patient with HLHS goes to the hybrid suite for ductal stenting. The surgeon performed a femoral artery cutdown through which interventional cardiology successfully placed the stent.

☑️ Operation type: Other
Hybrid Procedure – Example #3

Patient with multiple ventricular septal defects undergoes bilateral pulmonary artery banding. The patient arrived stable to the OR and the preoperative TEE notes the ductus arteriosus is closed.

Which of the following is the correct primary procedure?

❑ (2160) Hybrid Approach "Stage 1", Application of RPA & LPA bands with concomitant use of PGE to maintain ductal patency

❑ (3860) PA banding (PAB), Placement of unilateral or bilateral branch pulmonary artery band(s) without the need for concomitant PGE and/or ductal stent.
Patient with multiple ventricular septal defects undergoes bilateral pulmonary artery banding. The patient arrived stable to the OR and the preoperative TEE notes the ductus arteriosus is closed.

Which of the following is the correct primary procedure?

- (2160) Hybrid Approach "Stage 1", Application of RPA & LPA bands with concomitant use of PGE to maintain ductal patency
- (3860) PA banding (PAB), Placement of unilateral or bilateral branch pulmonary artery band(s) without the need for concomitant PGE and/or ductal stent.
Which banding procedure to code?

(2160) Hybrid Approach "Stage 1", Application of RPA & LPA bands with concomitant use of PGE to maintain ductal patency

- Application of bilateral pulmonary artery bands (right and left branch pulmonary arteries) with ductal patency maintained with prostaglandin (PGE) infusion and/or a previously placed ductal stent.

(3860) PA banding (PAB), Placement of unilateral or bilateral branch pulmonary artery band(s) without the need for concomitant PGE and/or ductal stent.

- Placement of unilateral or bilateral bands on the branch pulmonary arteries without the concomitant use of prostaglandin (PGE) and/or ductal stenting to maintain ductal patency.
In Summary

Training manual is posted

Note the updated definitions

Individual questions will not be posted

Available for help always!
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 Webinar
• July 18 @ 12pm CT

User Group Call
• August 1 @ 12pm CT
Contact Information

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Tech Support Analysis Report/Data Submission Questions
• STSDB_helpdesk@sts.org

Database Operational Questions
• STSDB@sts.org
THANK YOU FOR JOINING!